JASDF PHOTO BOOK PLUS

Japan Air Self-Defense Force

F-4 PHANTOM II

Photobook & Modeling Guide

The glorious 301 SQ

Record of the 301sq of JASDF

Planning and supervision: Isami Akiyama

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The Last Phantom Squadron

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Re maintenance of drag chute ·
Equipment used on the flight line

● PHOTO FILE OF THE 301SQ
Final year special painting
The last days in Hyakuri
Final layout of cockpit in detail

● MODELING GUIDE
1:48 F-4EJ Kai Phantom II
1:72 F-4EJ Phantom II
TAC Air Meet 1980 Ferris camouflage
1:32 F-4EJ Phantom II "MiG Phantom"

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by Isami Akiyama

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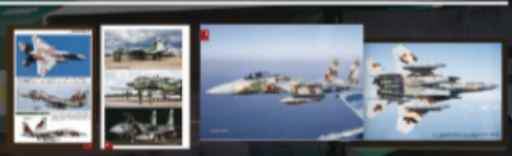

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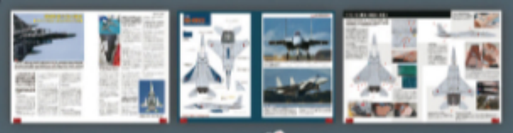

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Japan Air Self-Defense Force

F-4

PHANTOM II
Photobook & Modeling Guide

The glorious 301SQ

History of the 301st Squadron

Aug. 1972	Temporary F-4EJ Squadron launched (Hyakuri Air Base)
Oct. 1973	New organization of the 301st Squadron (Hyakuri Air Base 7th Air Wing)
Jan. 1976	The unit mark (frog) was established in January 1976.
Oct. 1983	10th anniversary of the founding of the squadron.
Jul. 1985	Moved to Nyutabaru Air Base to replace the 204th Squadron, that moved from Nyutabaru Air Base to Hyakuri Air Base due to model update from F-104 to F-15, and transferred to the 5th Air Wing.
Apr.1991	Model update to F-4EJ Kai started.
Jun. 1991	Model update from T-33A to T-4 started.
Oct. 1993	20th anniversary of the founding of the squadron.
Oct. 2003	30th anniversary of the founding of the squadron.
Oct. 2013	40th anniversary of the founding of the squadron.
Oct. 2016	As the 305th Squadron moves from Hyakuri Air Base to Nyutabaru Air Base, moved to the old haunts Hyakuri Air Base and transferred to the 7th Air Wing.
Dec. 2020	F-4EJ Kai - last flight.
Dec. 2020	Joined the 3rd Air Wing of Misawa Air Base as the new 301st Squadron equipped with F-35A.

Models used

1973-2001	F-4EJ
1991-2020	F-4EJ Kai
2020-	F-35A
1973-1993	T-33A
1991-	T-4

Planning and supervision: Isami Akiyama

航空自衛隊

(Photo : Akira Koyama)

Introduction

This book describes the final daily training of the 301st Squadron at the Hyakuri base before moving to Misawa due to the model reorganization of the 301st Squadron, which operated the F-4EJ Kai Phantom II until the end as the JASDF's squadron.

Then, focusing on the basic painting, color guides for aircraft that participated in the Tactical Air Meet, and modeling guides for F-4EJ, F-4EJ Kai, T-33A, and T-4 plastic models carefully selected from among many.

In the first half of "Photo collection of the last chapter of the F-4", we selected not only Phantoms, but also photos, which show the facial expressions and movements of the pilots and the grand crew who are in operation. Of course, we also prepared photos and painting patterns of the last year commemorative painting aircrafts.

In the middle, old photographs including F-4EJ and T-33A operated by the 301st Squadron are collected and configured to serve as references for painting and marking at that time. Furthermore, the machineries that remain behind-the-scenes such as the towing vehicles and engine starters vehicles as well as the scenes maintaining a drag chute are introduced.

Due to the number of pages, all of the TAC Air Meet painting aircrafts can't be introduced, but we chose some that look especially good for modeling.

It is composed of the painting examples from the substantial materials along with illustrations and photographs which recommend you to keep in your hand. With the cooperation of the alumnus who was in charge of painting at that time, we were able to incorporate a lot of unpublished information. Also, regarding the Mig Silhouette aircraft, which cannot be missed when talking about painting and marking of the 301st Squadron, we were able to turn it in to a more accurate painting guide which include the interview information with the alumnus who actually worked on painting at that time.

Considering the long operating period of F-4 of the 301st Squadron, it cannot be completely covered all contents in the limited pages, but we tried to put all the interview materials, which we have at hand, in this book. We hope this reference book will be the best for all modelers in the world.

Planning and supervision: Isami Akiyama

INDEX

About the basic paintings. Former painting version / New painting version P4

The last chapter of the F-4 P10

- Final year anniversary special painting Yellow (37-8315) · Blue (07-8436) ···· P11
- The last days in Hyakuri 1-4 ···· P27
- Spotter's eye at the shooting points ····· P51
- Final layout of cockpit in detail ···· P59

Photo file of the 301st Squadron P77

Behind the scenes P77

- Re-maintenance of drag chute ···· P78
- Equipment used on the flight line ···· P79
- Self-propelled engine starter KM-3 ···· P80
- 3t towing vehicle for aircraft ···· P82

Paintings and markings of TAC Air Meet · Virtual Enemy Aircraft · Founding Anniversary Aircrafts P83

Modeling guide P131

- 1:48 F-4EJ Kai Phantom II ···· P132
  5th Air Wing - the 301st Squadron F-4EJ Kai 427 Nyutabaru Air Base / Phantom Forever 2020
- 1:72 F-4EJ Phantom II 1980 TAC Air Meet - Ferris camouflage ···· P142
- 1:32 JASDF F-4EJ Phantom II "MIG Phantom" ···· P150
- 1:48 F-4EJ Kai Phantom II "First Moo Moo" ···· P156
- 1:72 F-4EJ Kai Phantom II The 301st Squadon 20th anniversary painted aircraft ···· P160
- 1:48 Kawasaki T-4 The 301st Squadron ···· P166
- 1:72 T-33A The 301st Squadron ···· P172

*In this book, the specifications and color names for exterior painting are described as follows to make it easier to understand.

1. Regarding the specifications of the exterior painting of the JASDF's F-4EJ and F-4EJ Kai, the one from the beginning of introduction is called "former painting specification", and the air-superiority paint adopted from 1992 is called "Air superiority camouflage painting".

2. The official color name on the JASDF's document for the side color of the aircraft of the former painting specifications is "light gray (FS16440)", but in this book it is written as "light gull gray (FS16440)" to distinguish it from the light gray of the new painting specification. The underside is insignia white (FS17875).

3. For the color of the air superiority camouflage paint, use the color names on theJASDF's document, light gray (FS36375) and dark gray (FS36320) as they are.

4. From page 4 to page 9, the official name on the JASDF's document are used in the explanation of basic painting.

*The color chips, and so on published in this book are not actual paints, but are printed in approximate colors. Please note that there may be slight differences from the actual color chip due to printing reasons. In addition, there may be differences in color even with the same specified color, but this gives priority to the paint color image of the actual aircraft due to individual differences in paint and fading.

*All illustrations, etc. that are not specified are in mm (millimeter).

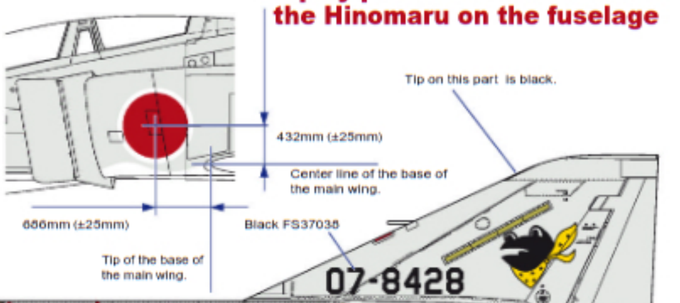
*Except for the examples, all the photos without the photographer's description were taken by Isami Akiyama.

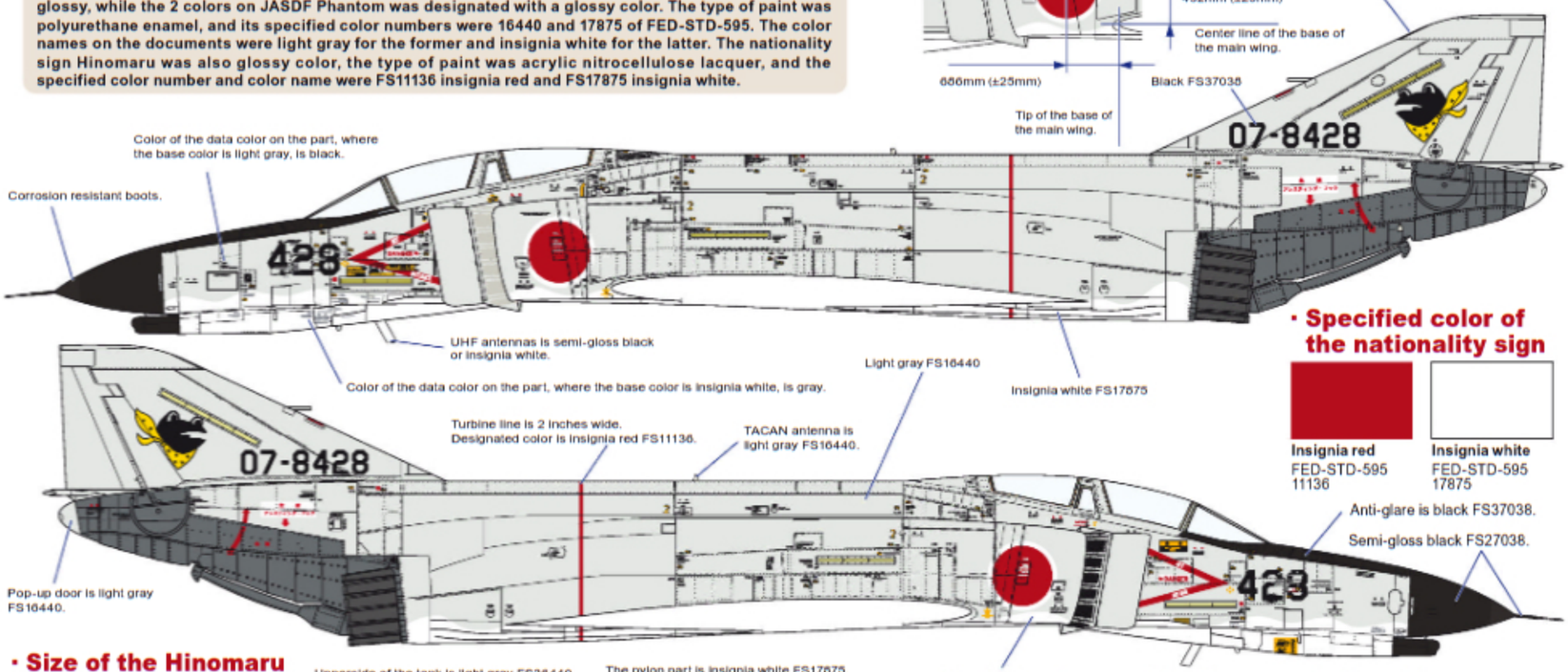
Planning · constitution · supervision : Isami Akiyama
Interview : Office A.K (Isami Akiyama Akira Koyama Kotaro Takahashi)
Photo : Isami Akiyama Hideyuki Ogata Akira Koyama Eiki Nakashima Kotaro Takahashi Naoto Shibata Shigeru Eto Tsuneharu Kuwahara Katsuhiro Okano Tetsuya Jin
Illustration : Isami Akiyama Yoshiyuki Kawano
Explanation : Isami Akiyama Satoshi Watanabe
Modeler : Isami Akiyama Masaaki Sekiya Toichiro Yokoyama Sweeper II Naonori Kanazawa
Cooperation : Hiroyuki Yano Yasushi Kawabuchi
Interview cooperation : JASDF

PAINTING OF F-4EJ / EJ KAI 1971-

The F-4EJ was painted in the light gull gray and insignia white color scheme of the F-4C instead of the US Air Force F-4E SEA camouflage that was the base. In the case of the US Air Force aircraft, the light gull gray on the upper side of the aircraft was matte and the insignia white on the underside of the aircraft was glossy, while the 2 colors on JASDF Phantom was designated with a glossy color. The type of paint was polyurethane enamel, and its specified color numbers were 16440 and 17875 of FED-STD-595. The color names on the documents were light gray for the former and insignia white for the latter. The nationality sign Hinomaru was also glossy color, the type of paint was acrylic nitrocellulose lacquer, and the specified color number and color name were FS11136 insignia red and FS17875 insignia white.

· Display position of the Hinomaru on the fuselage


Tip on this part is black.
432mm (±25mm)
Center line of the base of the main wing.
686mm (±25mm)
Black FS37038
Tip of the base of the main wing.

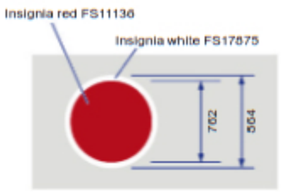

Color of the data color on the part, where the base color is light gray, is black.
Corrosion resistant boots.
UHF antennas is semi-gloss black or insignia white.
Color of the data color on the part, where the base color is insignia white, is gray.
Light gray FS16440
Insignia white FS17875
Turbine line is 2 inches wide. Designated color is insignia red FS11136.
TACAN antenna is light gray FS16440.
Pop-up door is light gray FS16440.
Anti-glare is black FS37038.
Semi-gloss black FS27038.
07-8428
428

· Specified color of the nationality sign

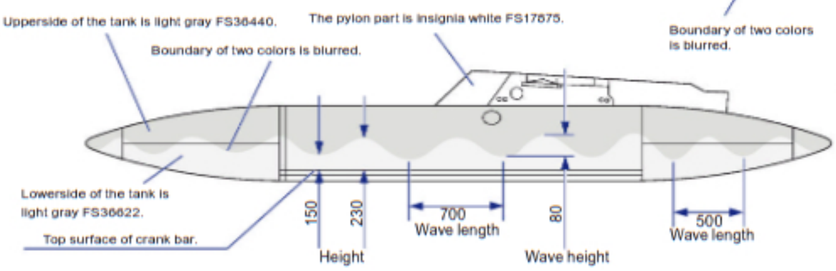
Insignia red
FED-STD-595
11136

Insignia white
FED-STD-595
17875

· Size of the Hinomaru on the sides



· Painting regulation of the 370 gallon drop tank



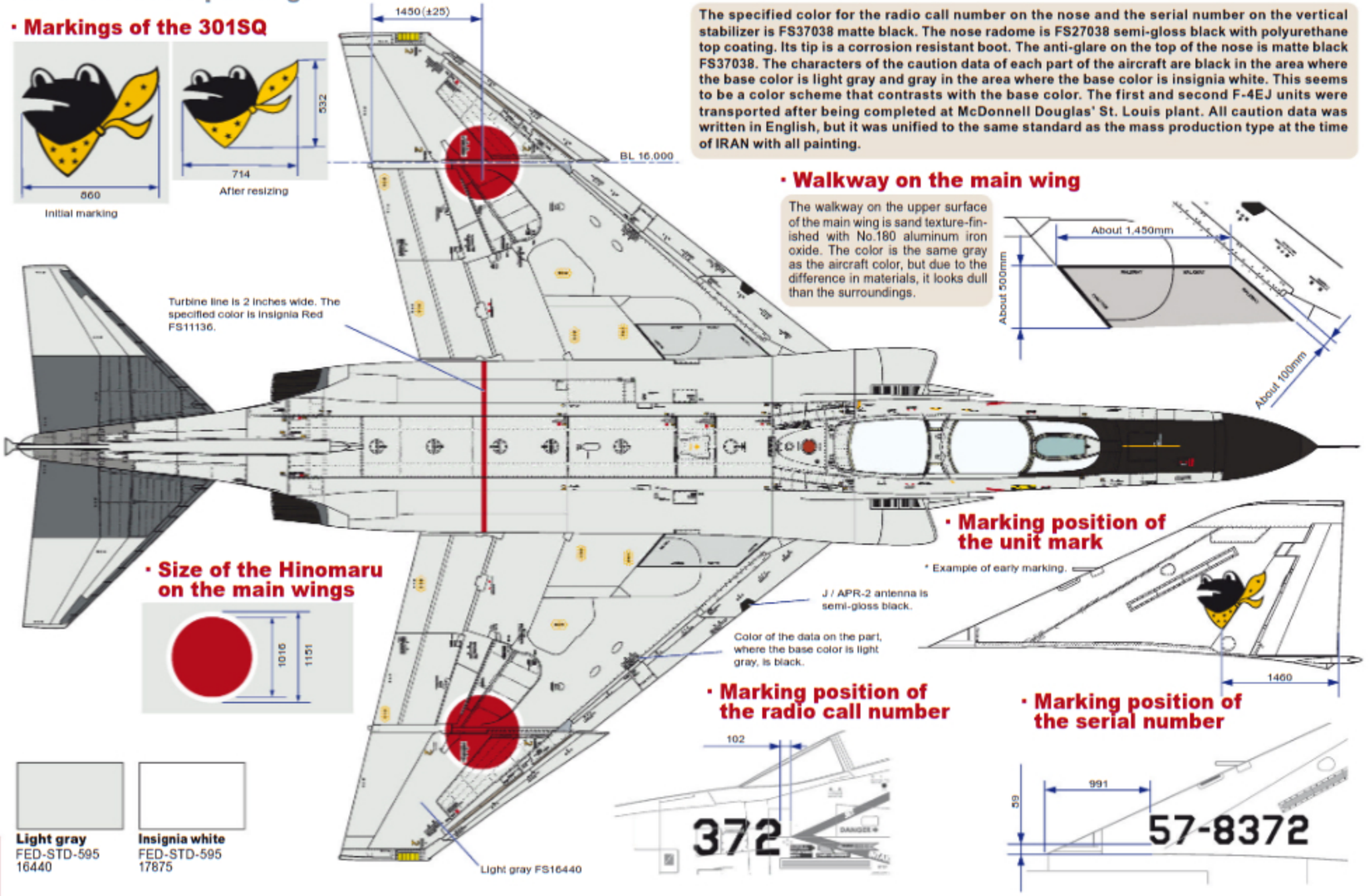
Unlike the basic painting of the aircraft, it is painted in two matte colors, FS36440 (upper) and FS36622 (lower). The type of paint is acrylic nitrocellulose lacquer. The boundary between the upper and lower colors is a wavy blur finish based on the upper surface of the crank bar, and the wavelength is 500 mm for the front and rear 3 peaks and 700 mm for the center 4 peaks. All amplitudes are 80mm, and the height from the crankbar is specified to be 150mm to the bottom of the wave and 230mm to the top. Symmetrical.

· Markings of the 301SQ

The specified color for the radio call number on the nose and the serial number on the vertical stabilizer is FS37038 matte black. The nose radome is FS27038 semi-gloss black with polyurethane top coating. Its tip is a corrosion resistant boot. The anti-glare on the top of the nose is matte black FS37038. The characters of the caution data of each part of the aircraft are black in the area where the base color is light gray and gray in the area where the base color is insignia white. This seems to be a color scheme that contrasts with the base color. The first and second F-4EJ units were transported after being completed at McDonnell Douglas' St. Louis plant. All caution data was written in English, but it was unified to the same standard as the mass production type at the time of IRAN with all painting.

· Walkway on the main wing

The walkway on the upper surface of the main wing is sand texture-finished with No.180 aluminum iron oxide. The color is the same gray as the aircraft color, but due to the difference in materials, it looks dull than the surroundings.

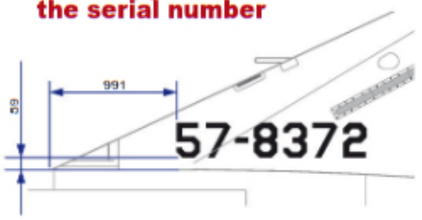

1450(±25)
BL 16.000
Turbine line is 2 inches wide. The specified color is Insignia Red FS11136.
J / APR-2 antenna is semi-gloss black.
Color of the data on the part, where the base color is light gray, is black.
Light gray FS16440

· Size of the Hinomaru on the main wings

· Marking position of the unit mark

· Marking position of the radio call number

· Marking position of the serial number



Light gray
FED-STD-595
16440

Insignia white
FED-STD-595
17875

About the basic paintings

· Specified color of nationality sign

Insignia Red
FED-STD-595
11136

Insignia White
FED-STD-595
17875

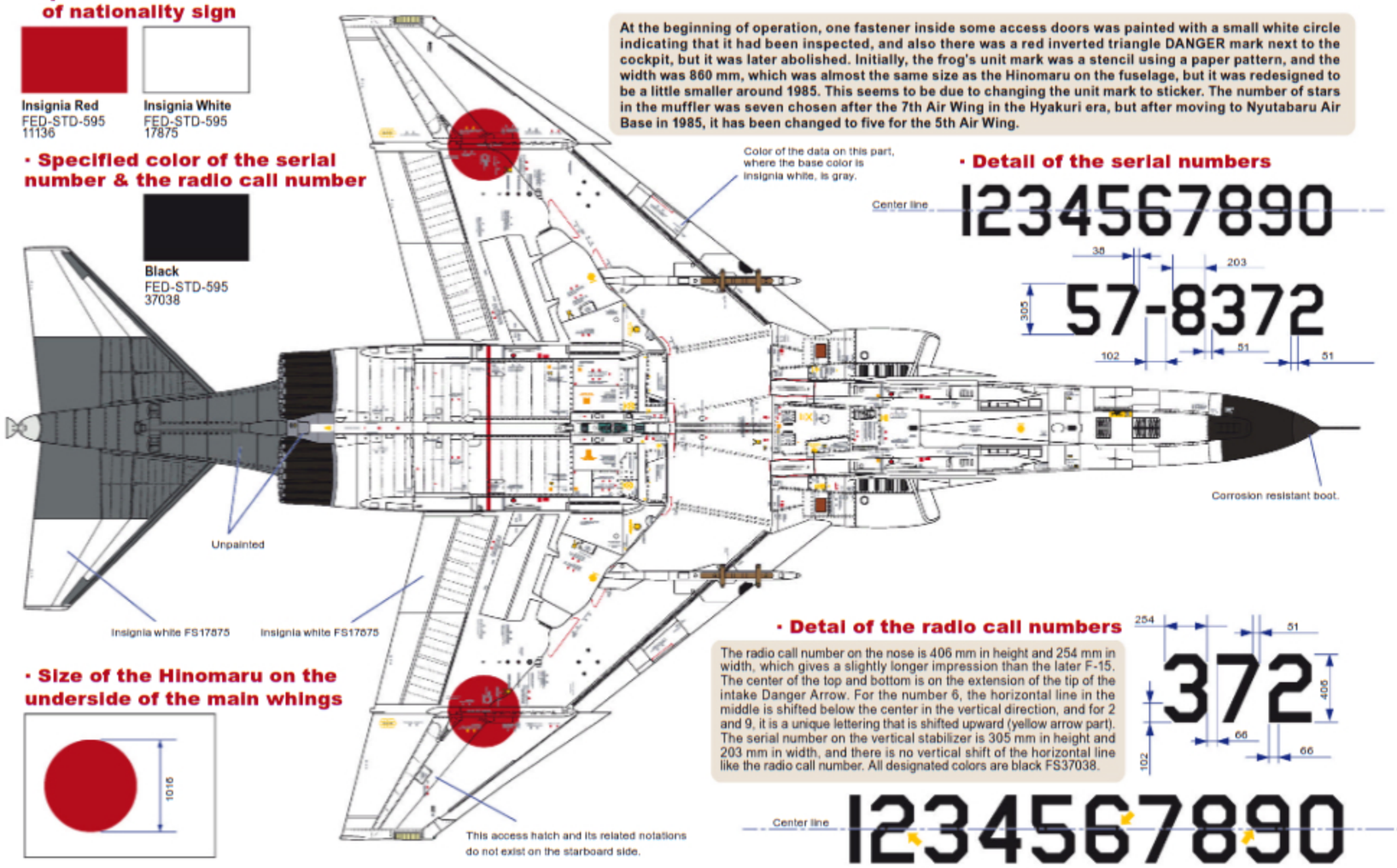
· Specified color of the serial number & the radio call number

Black
FED-STD-595
37038

At the beginning of operation, one fastener inside some access doors was painted with a small white circle indicating that it had been inspected, and also there was a red inverted triangle DANGER mark next to the cockpit, but it was later abolished. Initially, the frog's unit mark was a stencil using a paper pattern, and the width was 860 mm, which was almost the same size as the Hinomaru on the fuselage, but it was redesigned to be a little smaller around 1985. This seems to be due to changing the unit mark to sticker. The number of stars in the muffler was seven chosen after the 7th Air Wing in the Hyakuri era, but after moving to Nyutabaru Air Base in 1985, it has been changed to five for the 5th Air Wing.

Color of the data on this part, where the base color is insignia white, is gray.

· Detail of the serial numbers


Unpainted
Insignia white FS17875
Insignia white FS17875
Corrosion resistant boot.
This access hatch and its related notations do not exist on the starboard side.

· Detal of the radio call numbers

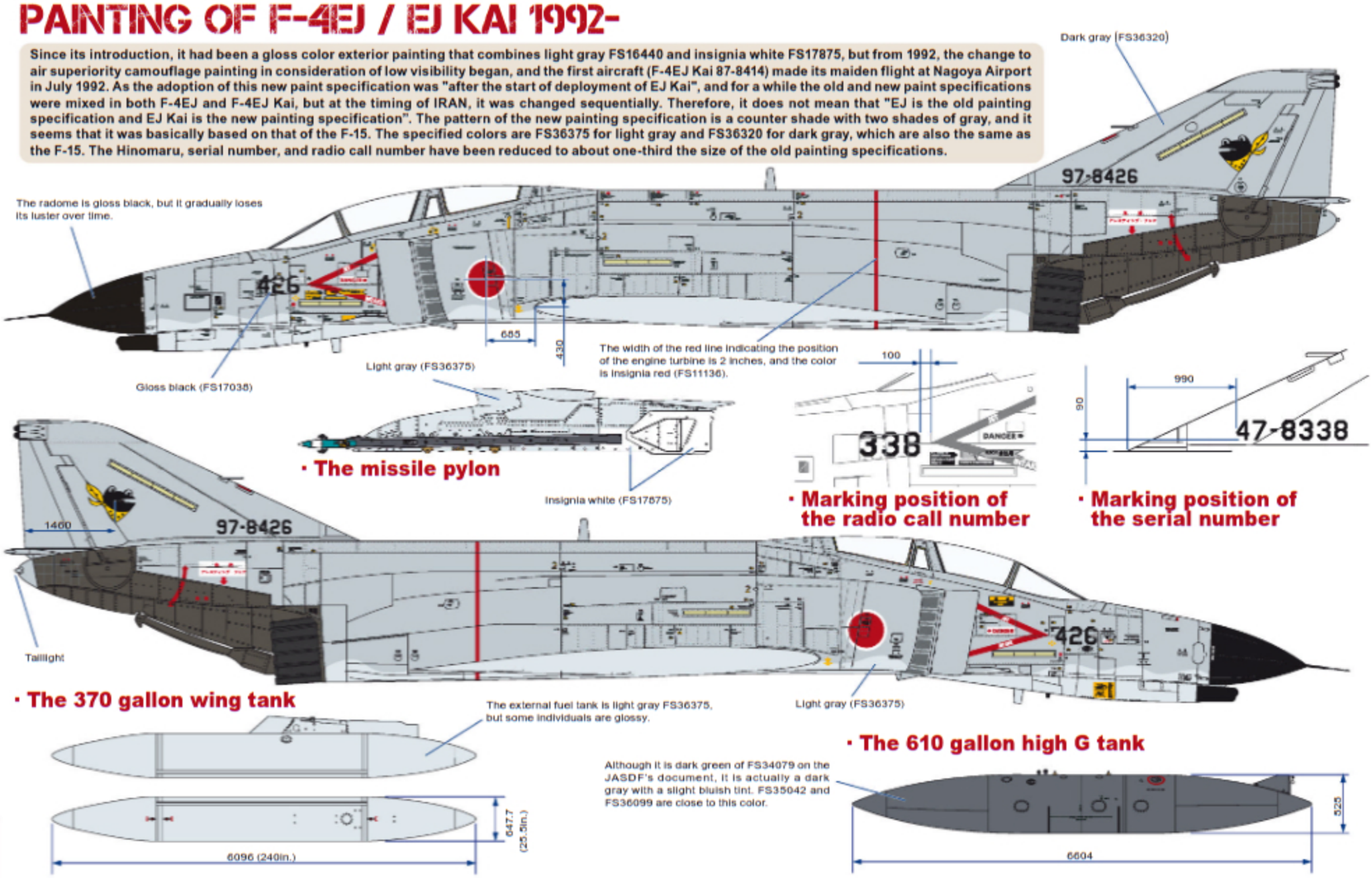
The radio call number on the nose is 406 mm in height and 254 mm in width, which gives a slightly longer impression than the later F-15. The center of the top and bottom is on the extension of the tip of the intake Danger Arrow. For the number 6, the horizontal line in the middle is shifted below the center in the vertical direction, and for 2 and 9, it is a unique lettering that is shifted upward (yellow arrow part). The serial number on the vertical stabilizer is 305 mm in height and 203 mm in width, and there is no vertical shift of the horizontal line like the radio call number. All designated colors are black FS37038.

The horizontal lines (arrow) are shifted up or down from the center line.

· Size of the Hinomaru on the underside of the main whings

PAINTING OF F-4EJ / EJ KAI 1992-

Since its introduction, it had been a gloss color exterior painting that combines light gray FS16440 and insignia white FS17875, but from 1992, the change to air superiority camouflage painting in consideration of low visibility began, and the first aircraft (F-4EJ Kai 87-8414) made its maiden flight at Nagoya Airport in July 1992. As the adoption of this new paint specification was "after the start of deployment of EJ Kai", and for a while the old and new paint specifications were mixed in both F-4EJ and F-4EJ Kai, but at the timing of IRAN, it was changed sequentially. Therefore, it does not mean that "EJ is the old painting specification and EJ Kai is the new painting specification". The pattern of the new painting specification is a counter shade with two shades of gray, and it seems that it was basically based on that of the F-15. The specified colors are FS36375 for light gray and FS36320 for dark gray, which are also the same as the F-15. The Hinomaru, serial number, and radio call number have been reduced to about one-third the size of the old painting specifications.



· The missile pylon

· Marking position of the radio call number

· Marking position of the serial number

· The 370 gallon wing tank

The external fuel tank is light gray FS36375, but some individuals are glossy.

· The 610 gallon high G tank

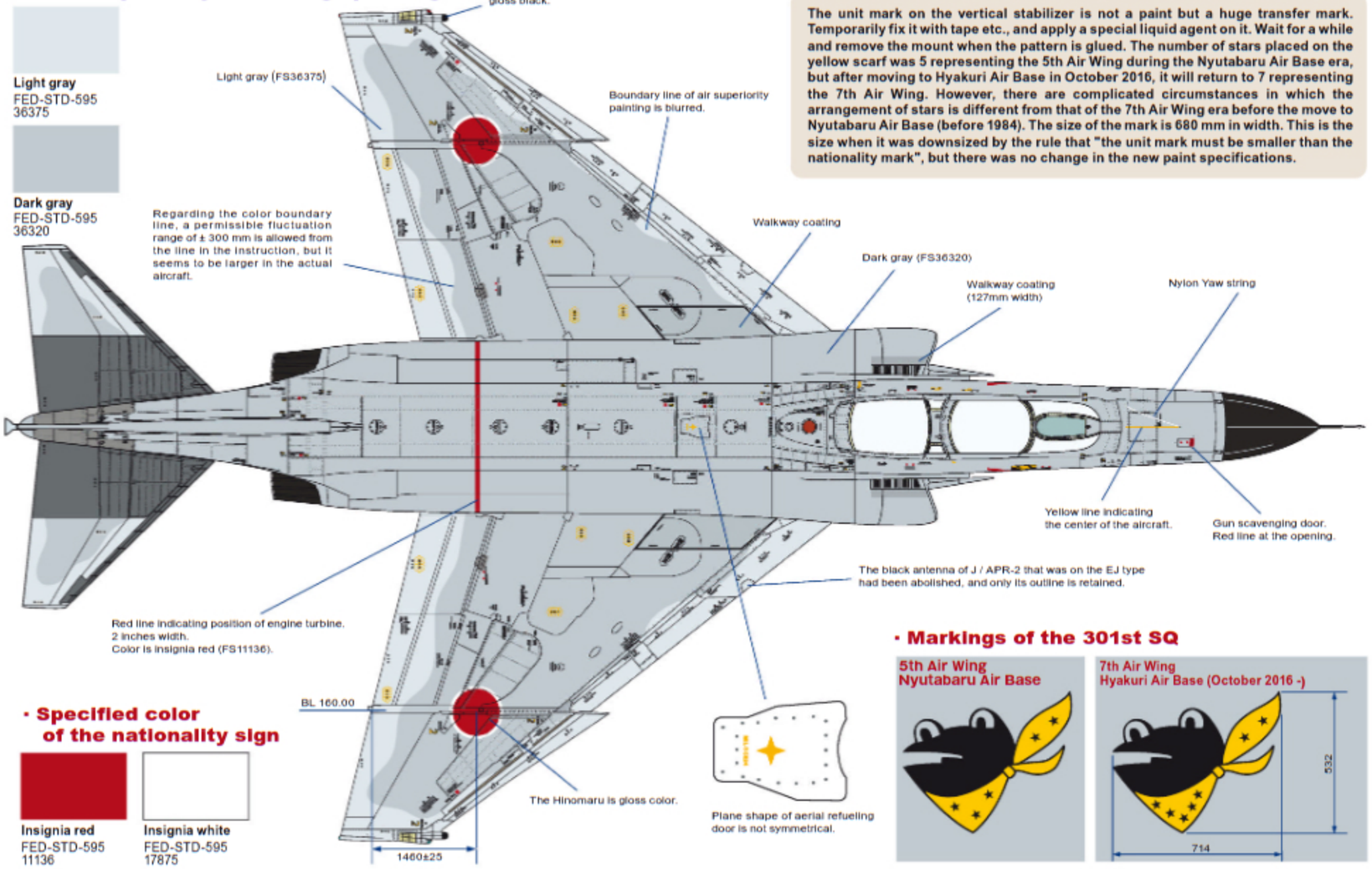
Although it is dark green of FS34079 on the JASDF's document, it is actually a dark gray with a slight bluish tint. FS35042 and FS36099 are close to this color.

About the basic paintings

· Specified color of the air superiority camouflage painting

Light gray
FED-STD-595
36375

Dark gray
FED-STD-595
36320


J/APR-6 antenna is gloss black.
Light gray (FS36375)
Boundary line of air superiority painting is blurred.
Regarding the color boundary line, a permissible fluctuation range of ± 300 mm is allowed from the line in the instruction, but it seems to be larger in the actual aircraft.
Walkway coating
Dark gray (FS36320)
Walkway coating (127mm width)
Nylon Yaw string
Yellow line indicating the center of the aircraft.
Gun scavenging door. Red line at the opening.
The black antenna of J / APR-2 that was on the EJ type had been abolished, and only its outline is retained.
Red line indicating position of engine turbine. 2 inches width. Color is insignia red (FS11136).
BL 160.00
The Hinomaru is gloss color.
Plane shape of aerial refueling door is not symmetrical.
1460±25

The unit mark on the vertical stabilizer is not a paint but a huge transfer mark. Temporarily fix it with tape etc., and apply a special liquid agent on it. Wait for a while and remove the mount when the pattern is glued. The number of stars placed on the yellow scarf was 5 representing the 5th Air Wing during the Nyutabaru Air Base era, but after moving to Hyakuri Air Base in October 2016, it will return to 7 representing the 7th Air Wing. However, there are complicated circumstances in which the arrangement of stars is different from that of the 7th Air Wing era before the move to Nyutabaru Air Base (before 1984). The size of the mark is 680 mm in width. This is the size when it was downsized by the rule that "the unit mark must be smaller than the nationality mark", but there was no change in the new paint specifications.

· Markings of the 301st SQ

· Specified color of the nationality sign

Insignia red
FED-STD-595
11136

Insignia white
FED-STD-595
17875

About the basic paintings

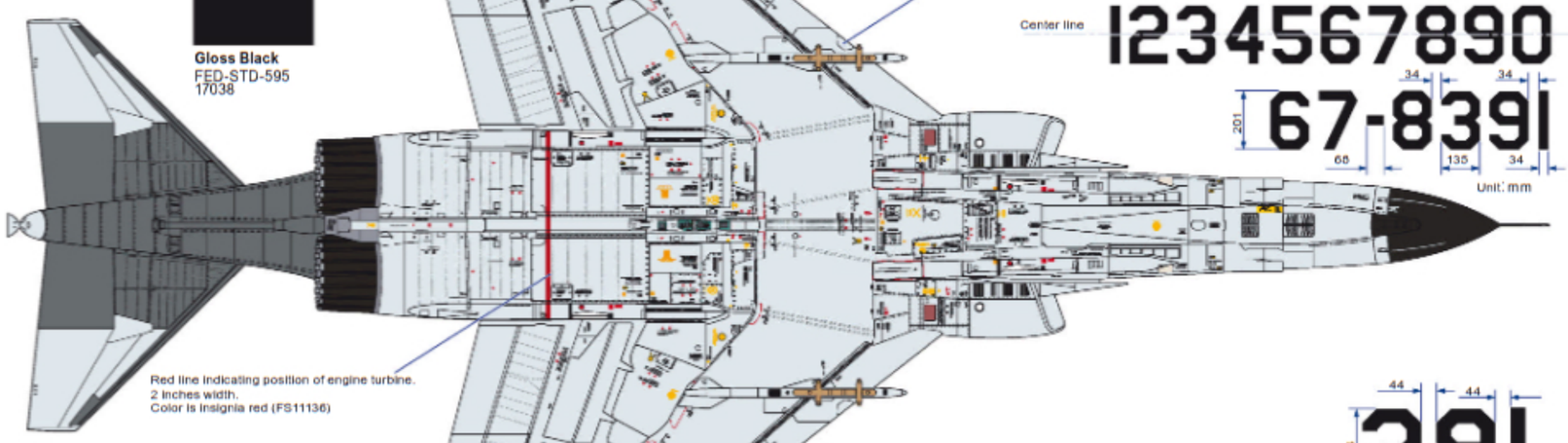
· Specified color of nationality sign

Insignia red
FED-STD-595
11136

Insignia white
FED-STD-595
17875

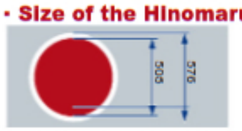
· Specified color of serial number and radio call number

Gloss Black
FED-STD-595
17038

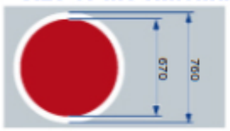

J/APR-6 antenna is gloss black
Light gray (FS36375)
The black antenna of J / APR-2 that was on the EJ type had been abolished, and only its outline is retained.
Red line indicating position of engine turbine. 2 inches width. Color is insignia red (FS11136)
BL 160.00
1460±25

•Detail of the serial numbers

· Size of the Hinomaru on the fuselage

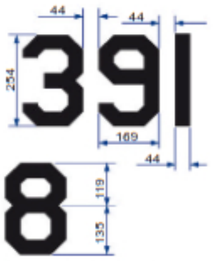


· Size of the Hinomaru on the main wing



· Detal of the radio call numbers

The radio call number of the nose in the air superiority camouflage painting is 254 mm in the top and bottom and 169 mm in the width, and the center of top and bottom is on the extension of the tip of the intake Danger Arrow. For the number 6, the horizontal line in the middle is shifted below the center in the vertical direction, and for 8 and 9, it is a unique lettering shifted upward (yellow arrow part). The serial number of the vertical stabilizer is 201 mm in top and bottom and 135 mm in the width, and there is no vertical deviation of the horizontal line like the radio call numbers 6, 8 and 9. All designated colors are gloss black FS17038.



The horizontal lines (arrow) are shifted up or down from the center line.

Photo collection

F-4 PHANTOM II LAST CHAPTER

- Final year anniversary - Special painting Yellow (37-8315) · Blue (07-8436)
- The last days in Hyakuri 1-4
- Spotter's eye at the shooting points
- Final layout of cockpit in detail

In the 301st Squadron, two anniversary painting aircraft were introduced to finish the operation of the Phantom. Here, let's see the details of the design with the interview photos and illustrations. It was surprising that some of the paints actually used were water-based paints for plastic models. How many of them were prepared ... In the latter half of this chapter, photos of the last days in Hyakuri and detailed photos of the cockpit are carried. Please enjoy fully the appearance of the Phantom of "that day".

THE 301ST SQUADRON F-4 FINAL YEAR ANNIVERSARY PAINTINGS

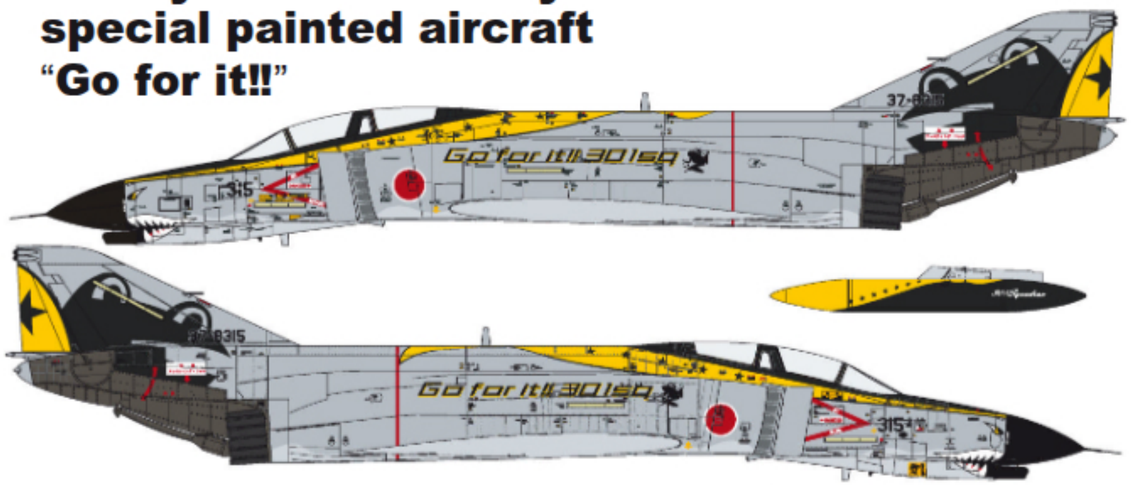
Go for it!! 301sq

The 301st Squadron F-4 Final year anniversary special painted aircraft (Yellow)

F-4EJ Kai 37-8315

The 301st Squadron completed the operation of the F-4EJ Kai, which had been equipped for many years, by the end of 2020, updated the model to the F-35A and moved to Misawa base, but prior to that, in August 2019 introduced a special painting aircraft to commemorate the F-4 Final Year.
The aircraft, used for this, was F-4EJ Kai 37-8315. The design was solicited from within the department, and was decided in consideration of the opinions, feasibility, workability, cost, etc. of the senior unit. The motif is a frog unit mark, which is placed large on the vertical stabilizer and a yellow scarf is designed on the back of the fuselage and the upper surface of the main wing. The scarf on the main wing has 5 stars on the left wing, which represents the 5th Air Wing at Nyutabaru Base, and the 7 stars on the right wing, which represents the 7th Air Wing in Hyakuri. The scarf on the upper part of the fuselage has 5 stars on each side of the cockpit and two on the ribbon at the rear, so that it looks like seven stars and five stars no matter which one you follow. The "Go for it !! 301sq" logo and the frog silhouette are placed on the side of the fuselage, and the shark teeth that are indispensable for the long nose Phantom are also drawn on the nose. The paint used is two colors, yellow and black, which are the "Asahipen water-based versatile colors" which are advertised as "stain-resistant and highly durable." This is a commercial product that is normally sold at home improvement stores.

Final year anniversary special painted aircraft "Go for it!!"



F-4EJ Kai 37-8315 Aug. 2019 - Dec. 2020
Hyakuri Air Base

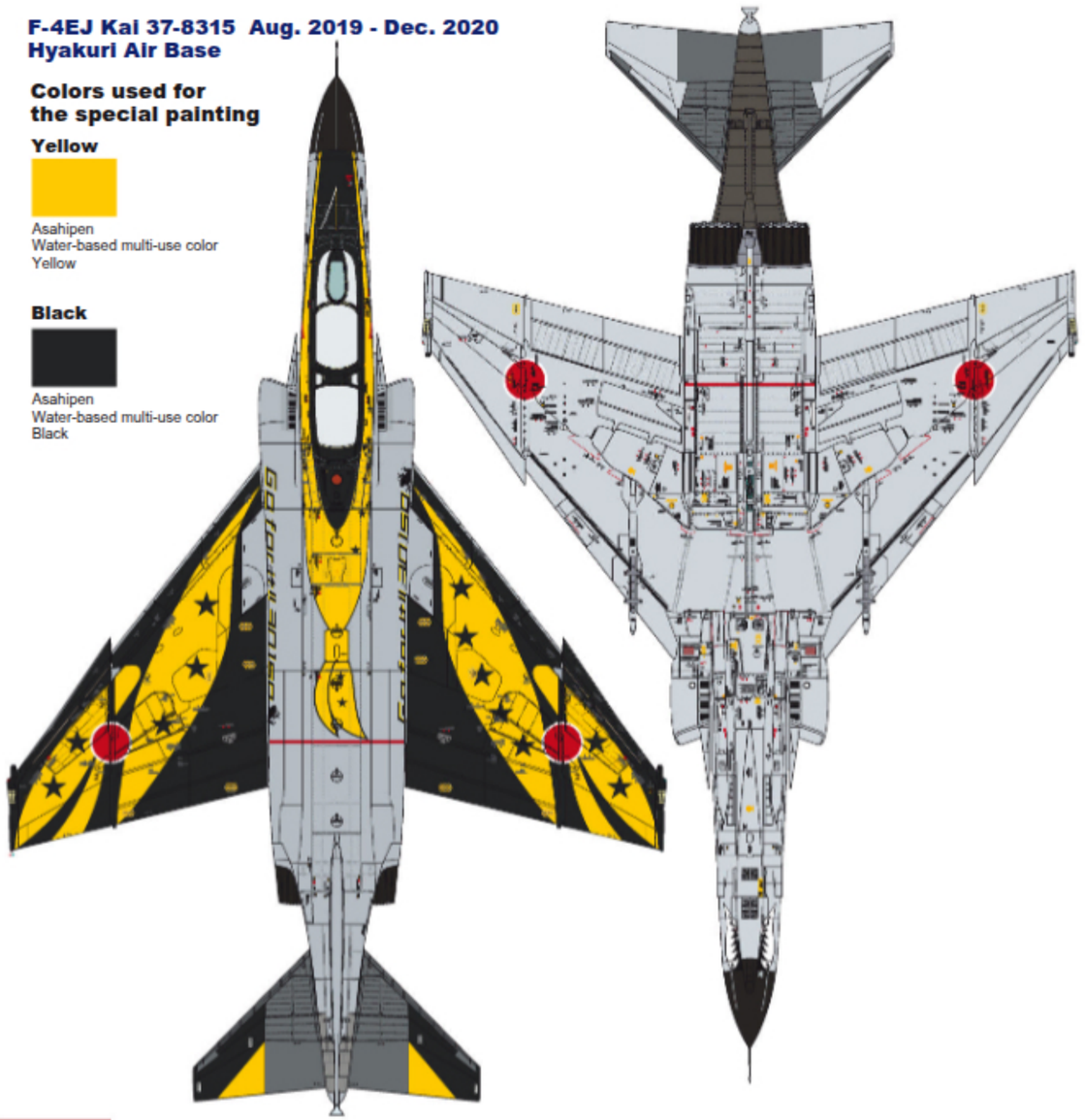
Colors used for the special painting

Yellow

Asahipen
Water-based multi-use color
Yellow

Black

Asahipen
Water-based multi-use color
Black



A yellow commemorative painted aircraft located in the lamp area of Hyakuri Air Base. The original ghost gray part is so beautiful as if it is just returned from IRAN (Inspection and Repair As Necessary). No commemorative paint was designed on the underside of the fuselage, but the 370 gallon wing tank and the 610 gallon high G tank in the center were painted with a yellow scarf motif. The ladder for pilots is painted in silver.

F-4EJ Kai 37-8315

The chock was originally yellow, but the chock for this aircraft had a Keroyon mark, logos and lines such as "Last chapter" and "Well, do you like Phantoms?"

A commemorative painted aircraft taking off from the Runway 07 at Tsuiki Air Base, which was visited during cross-country training on November 13, 2020. The armament pylon on the right is equipped with a Traveler's Pod. Tsuiki Air Base is a base related to the Phantom, where the 304th Squadron was located for a long time. It is believed that the F-4EJ Kai 87-8415 of the Gifu Air Base Flight Development Experiment Team, which arrived on March 15, 2021, will be exhibited and preserved in the base as it is. (Photo: Naoto Shibata)

THE 301ST SQUADRON F-4 FINAL YEAR ANNIVERSARY PAINTINGS

Phantom Forever

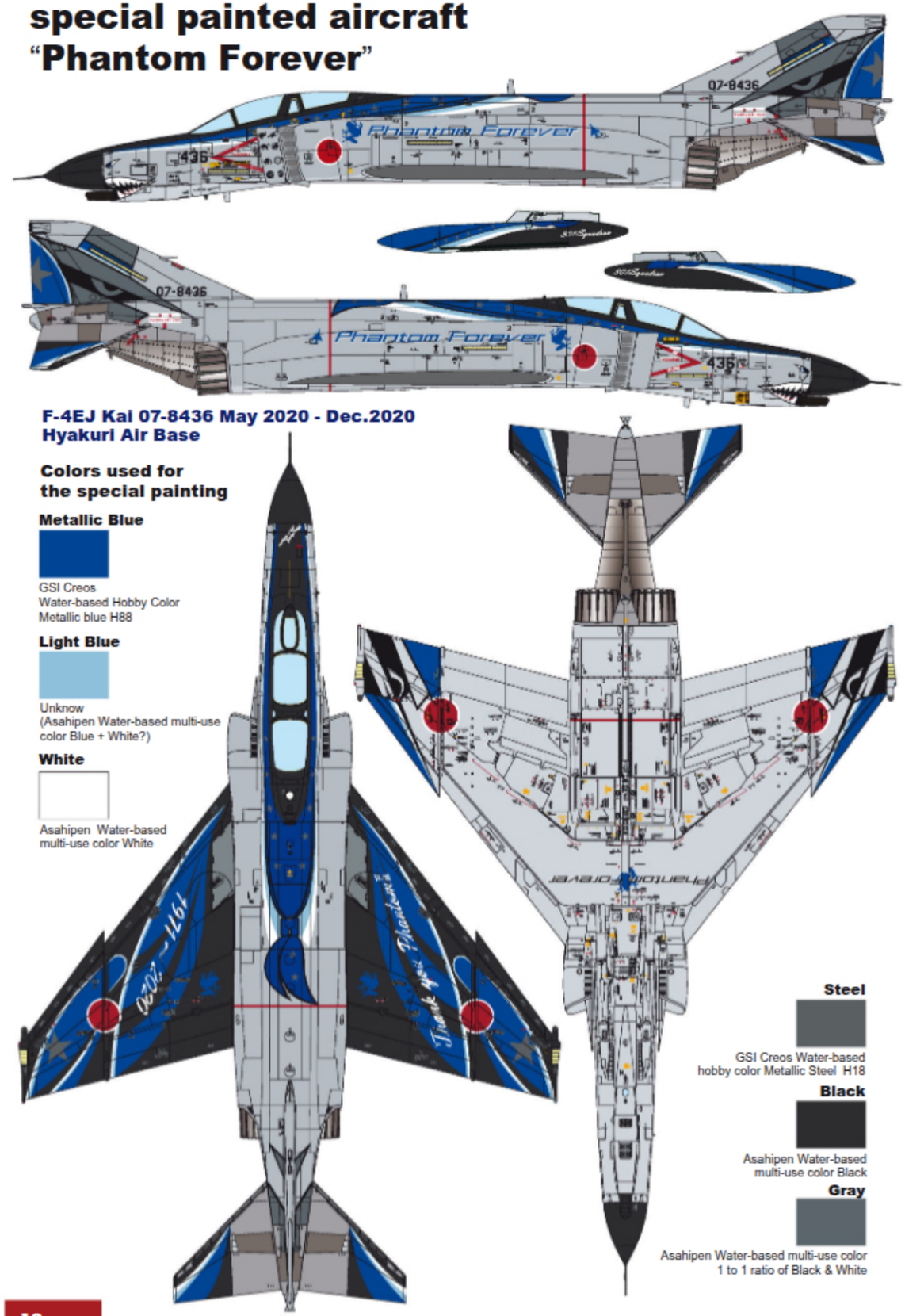
The 301st Squadron F-4 Final year anniversary special painted aircraft (Blue)

F-4EJ Kai 07-8436

Following the yellow Phantom, the 301st Squadron introduced another blue-based commemorative painted aircraft in May 2020. The design follows the yellow one to give a sense of unity. The main feature of the vertical stabilizer is that it is designed with a spook, which is the mascot of the F-4 Phantom II, not a frog, and a spook is also designed on the underside of the outer wing.The basic layout of the upper surface of the fuselage and the upper surface of the main wing is the same as the yellow, but the number of stars and the arrangement of details are different. The basic blue color is metallic blue, which shows a respect to the metallic blue painted to commemorate the 50th anniversary of the establishment of the JASDF of RF-4E, which was involved when the captain was previously enrolled in the reconnaissance aviation corps. The intake vane on the left is lined with the TAC Squadron equipped with a Phantom and the 501st Squadron mark, the "Phantom Forever" logo and the silhouette of the frog and Phantom were placed on the side of the fuselage. The silhouette of the Phantom overlaps with the silhouette of the F-35A, which was entrusted with the rest.The "Phantom Forever" logo and frog silhouette are also located in the center of the underside of the fuselage. The paints used are black and white, which are Asahipen's water-based versatile colors, and what surprising is that GSI Creos water-based hobby colors "H18 Black Iron" and "H88 metallic blue" are used. Spook's gray is a one-to-one mixture of Asahipen's black and white. The stars on the vertical stabilizer and others were initially black, but later they were overcoated with the water-based hobby color black iron.

Final year anniversary special painted aircraft "Phantom Forever"

(Illustration :Yoshiyuki Kawano)



F-4EJ Kai 07-8436 May 2020 - Dec.2020
Hyakuri Air Base

Colors used for the special painting

Metallic Blue

GSI Creos
Water-based Hobby Color
Metallic blue H88

Light Blue

Unknow
(Asahipen Water-based multi-use color Blue + White?)

White

Asahipen Water-based multi-use color White

Steel

GSI Creos Water-based hobby color Metallic Steel H18

Black

Asahipen Water-based multi-use color Black

Gray

Asahipen Water-based multi-use color 1 to 1 ratio of Black & White

(^ Photo : Akira Koyama)

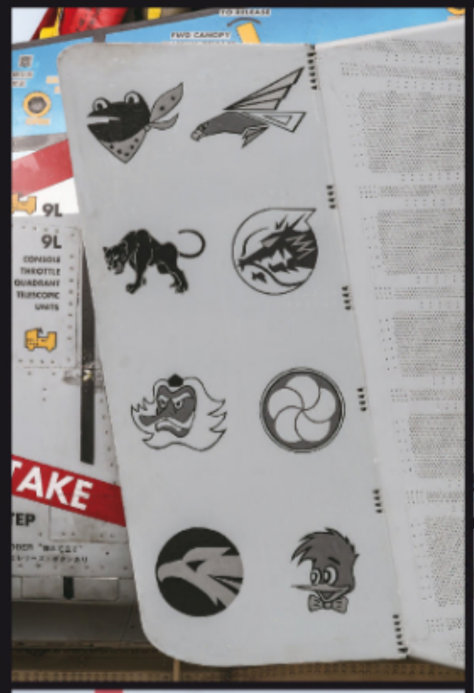
^ The chock is painted in metallic blue with the unit mark, spook and the "Phantom Forever" logo.
There were also stencils such as "Do you like Phantoms when you meet me?", "Don't forget me forever", "Phantoms forever ..." in Japanese.

< The "Phantom II Last Chapter" sign is on the top of the nose.

F-4EJ Kai 07-8436
436
DANGER
INTAKE

Phantom Forever

07-8436
アレスティング・フック


9L
9L
AKE

54L

07-8436

Phantom Forever
JET

A little after 10 AM on November 16, 2020, the Blue Phantom, which was visiting Tsuiki Air Base as part of cross-country training, took off from the runway 07 toward Hyakuri Air Base while people involved and fans outside the fence were watching. This was the last Phantom takeoff at the base. (Photo: Naoto Shibata)

Around 14 PM on November 16, 2020, the blue commemorative painting aircraft which returned from Tsuiki in the morning took off from Hyakuri Air Base Runway 21 and headed for Nyutabaru Air Base. You can clearly see the design of the main wing and the underside of the stabilizer. The silhouette of the frog is hidden by the center tank, but the logo in the center of the fuselage can be seen. You can also see the difference in the lines on the underside of the bands of each color wrapped around each tank. This aircraft carried out the last flight on December 10, the same year, and the operation of the F-4 Phantom was completed for the 301st Squadron (Photo: Akira Koyama)

The Blue unit 436 to form take off the Runway 21 with normal local training at Hyakuri Air Base
(Photographed on July 2, 2020: Isami Akiyama)

Formation take of by the Yellow unit 315 and blue unit 436 for photo missions. The left and right armament pylons are fully equipped with AAM-3 training bullets (September 28, 2020, Photo: Katsuhiro Okano)

The Yellow unit 315 taking off from Hyakuri Air Base Runway 03 for cross-country training. On this day, it headed the Nyutabaru Air Base in Miyazaki Prefecture. (November 16, 2020 Photo: Akira Koyama)

The Blue unit 436, which visited Nyutabaru Air Base for cross-country training, takes off from the Runway 10 after receiving a grand see-off from base personnel. (November 17, 2020 Photo : Yoshio Murakami)

At Nyutabaru Air Base, where can be said to be the second home of the 301st Squadron, the blue unit 436 and the Yellow unit 315 also visited. Following the unit 436, the unit 315 also took off. This was the last takeoff of Nyutabaru Air Base by Phantom.
(November 17, 2020 Photo : Hideyuki Ogata)

The originally plan of JASDF ANNIVERSARY AIR REVIEW at Hyakuri Base was reduced in scale due to COVID-19, became unattended, and was finally held after changing the location to Iruma Air Base.
The photo shows the Blue unit 436, which flew to Iruma Air Base for a ground exhibition on November 26, 2020 (Photo: Akira Koyama).

November 26, 2020 Iruma Air Base (Photo: Akira Koyama)

Photo collection

F-4 PHANTOM II THE LAST CHAPTER

The last days in Hyakuri 1

The 301st Squadron that operated the F-4 to the end in the Squadrons of the JASDF. The operation was virtually completed on December 10, 2020, and it was reorganized into the F-35A equipment unit under the 3rd Air Wing of Misawa Air Base on 15th of the same month. While the number of F-4s are decreasing toward the end of operation, we interviewed the team three times, which had been training in the same way as before, in order to maintain an immediate response system until the end. I recorded the daily life of the F-4 and the crew involved there. The photo shows each flight on the time axis, so it will be good reference for modelers when modeling a diorama.

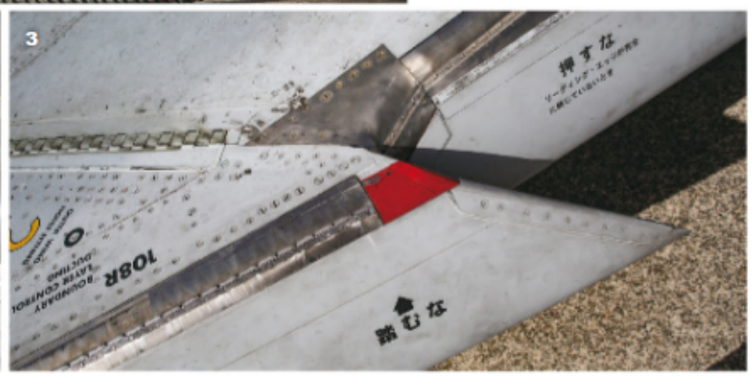
September 15, 2020　2nd-3rd

Above: After starting the engine, a preflight check is underway in collaboration with the grand crew. A dedicated intercom is used for each member's call. In the foreground is a carbon dioxide fire extinguisher for aircraft fires. **Bottom**: The close shot of the pilots preparing to start in the cockpit taken with a super-telephoto lens.

Taxiing out. After all the preparations were completed, the 440 headed the runway while being sent off by the maintenance staff with salute. A mechanic guides with a hand signal while checking the safety.

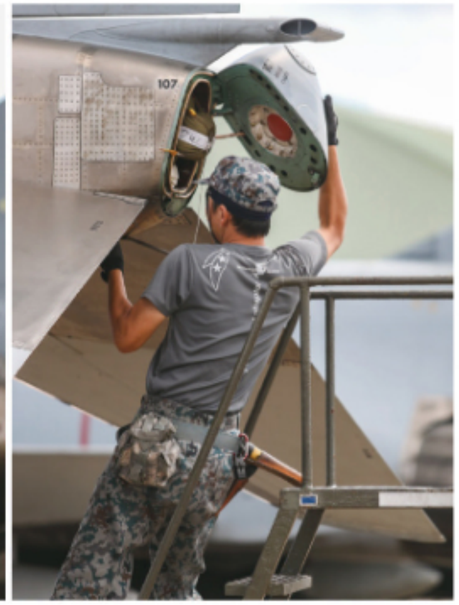
The 355 taking off from the Runway 03. Ibaraki Airport terminal can be seen in the background. The speed at lift-off is about 150 knots, depending on the equipment of the aircraft. As soon as the wheels leave the ground, landing gears and flaps are pulled in.

The 416 returned to the ramp area after training. This angle, which captured the front landing gear between the left and right main landing gears, is still attractive.



The last days in Hyakuri 1

1: Line maintenance in between flight. A grand crew who carries out inspection and maintenance of the aircraft.
2,3: The front and rear edge flaps of the main wing are BLC (boundary layer control) type, and bleed air extracted from the engine is ejected from the base of the upper surface of the flaps.
4,5: The spoiler is hydraulically operated and its operating angle is 42 to 45 degrees. The speed brake on the underside of the fuselage is also hydraulically operated. The operating angle is 38 to 42 degrees.
6: The arresting hook is hydraulically pressed so that it does not bounce on the road surface and lose the wire.



A ground crew attaches a pack of drag chute prepared by a squad for lifesaving equipment (see page 78) to the aircraft.

Preflight check for 3rd flight of the day.

And to the third flight of the day.

Photo collection

F-4 PHANTOM II LAST CHAPTER

The last days in Hyakuri 2

September 29, 2020　2nd-3rd

1: The busiest man have the most leisure. A pilot and a grand crew chatting in front of the T-4 before the flight. Everyone standing here is an expert and has a lot of trust.

2: Before boarding, the pilot himself will inspect the aircraft finished by the grand crew. Double inspection improves safety.

3: Three F-4EJ Kais taxiing the guideway towards the Runway 03. The canopy is open to prevent accidental seat ejection.

Immediately after the last chance, the control tower issued a takeoff clearance "Cleared for take off." F-4EJ Kai aligns to the runway while the crew salutes. After this, with the brakes applied, put the left and right engines in the military, make a final check, and then start the takeoff runway.

1

2

3

4

1.Burn the afterburner and start the takeoff runway. The engine is J79-IHI-17, which is a licensed production of General Electric's turbojet engine J79-GE-17 by Ishikawajima Harima Heavy Industries. It has a total length of 17.4ft and a thrust of 11905lbf (17835lbf when using an afterburner).

2,3.After the training, the Grand Crew guides the T-4 returning to the line to the parking position (**2**.Photo: Akira Koyama)

4.F-4EJ breaks to ramp in. By pressing the red button on the control stick grip, the front wheels can be steered by the rudder pedal.

Before the engine is stopped, the ground crew goes under the aircraft and does his works.

The last days in Hyakuri 2

Pilots returning to operation after training. Freed from tension, look back on the flight with a smile. Debriefing is waiting after this.

1.Three pairs heading for the 3rd flight of the day.

2,3. External inspection before flight is underway. It's a common scene on the flight line, but a small error can be life threatening, so both the pilot and the grand crew are serious about it. They do not overlook even the slightest oddity.

T-4 (above) and F-4EJ Kai (below) landing on the Runway 03 after completing the 3rd training.

Photo collection

F-4 PHANTOM II LAST CHAPTER

The last days in Hyakuri 3

In the afternoon of November 20, 2020, a send-off party for the 301st Squadron was held at Hyakuri Air Base, and the flight training was disclosed to the press in the morning. The Blue, the Yellow, and the 440, the final of the All Phantom II series, made a flight. After takeoff, AGG (Air to Ground Gunner) training for virtual targets on the base was disclosed to the press.

November 20, 2020 1st

Ready for flight and the people involved and the press watching, the blue special paint takes a taxi out and head for the Runway 21 as the first aircraft of the day.

The second aircraft of the day was the yellow special painted aircraft.
The large Keroyon mark on the vertical stabilizer is impressive.

The third aircraft is the 440th unit with normal paint.
The aircraft is currently on display indoors at Hamamatsu Public Relations Center (Airpark) adjacent to Hamamatsu Air Base in Shizuoka prefecture.

Two special painted aircrafts take off the runway 21 side by side.

F-4EJ Kai 440 entering from the south side of the base for AGG training.

The yellow special painted aircraft leaves the east side of the base after simulated shooting.

After the AGG training, the blue special painting aircraft enters from the north side of the base and carry out a low-flying.

Photo collection

F-4 PHANTOM II LAST CHAPTER

The last days in Hyakuri 4

Even though the model is about to be updated, night training is of course carried out normally. By the time you finish training and ramp in, the line is already dark. When the camera is placed on a tripod and exposed for a long time, the red and green guide lights and flashlights of the grand crew wearing a safety vest, and the navigation lights of the Phantom create a beautiful night scene. (Shooting cooperation: Hyakuri Air Base public relations team)

November 20, 2020 Night

As soon as the aircraft ramps in, the ground crew begins work. Check the parts that cannot be confirmed unless the engine is running. The light trails under the fuselage and on the front edge of the main wing are the flashlights of the grand crew.

BPO (Basic POst-flight inspection) is carried out at the end of the day's training. The lights of each part of the aircraft will also be inspected. The illuminance of FL LGT (panel formation light) can be adjusted with the dial on the side console.

Photo collection

F-4 PHANTOM II LAST CHAPTER

Spotter's eye at the shooting points

Since the return of the 301st Squadron from Nyutabaru Air Base in October 2016, Hyakuri Air Base has become the premier base with the 302nd Squadron and the 501st Squadron. All the phantoms except the aircrafts belonging to the Air Development and Test Wing gathered. A large number of phantom fans visited not only from all over Japan but also from overseas. Here, let's look back on the aircrafts belonging to the 301st Squadron at Hyakuri Base, remembering the familiar scenery from the outside of the outer fence. (Photo: Isami Akiyama)

Hyakuri Air Base Runway 03 Afternoon Landing

At the time of landing of the 3rd training when using the Runway 03, the sun is located on the left rear side, and there is no extra shadow on the aircraft, so it will be a beautiful picture. In winter, the sun will be low and the aircraft will be dyed red (photographed on April 15, 2019).

Hyakuri Air Base Runway 03 Morning Departure
In the morning when using Runway 03, if it is the first take-off at an early time, the light will be direct light, and if you take a lower bank toward the airspace, the light will hit the back of the aircraft. (Photographed on March 3, 2020)

Hyakuri Air Base Runway 03 Morning Departure
Mt. Tsukuba, a sacred mountain, rises to the west of Hyakuri Air Base. During the morning takeoff using the Runway 03, the shot captures both Mt. Tsukuba and the aircraft storing the landing gear. (Photographed on October 22, 2018)

Hyakuri Air Base Runway 03 L(west sida) Afternoon Landing
In the afternoon when using the Runway 03, the sun is located on the left rear side of the aircraft, so when shooting the landing, the angle slightly chasing the aircraft will be front light. If the aircraft landed on 03L (west side), it would be a powerful picture. On this day, the sky from the base to the east was covered with black clouds, so the view became mysterious that dyed the clouds and the aircraft orange. (Photographed on January 9, 2020)

Hyakuri Air Base Runway 21 Morning Departure
The sun is located on the left rear side, but the aircraft that taking off makes a left turn toward the airspace, so if the aircraft tilts quickly, you can take a picture of the upper surface in the sun. The earlier the time, the lower the position of the sun, and you can take beautiful pictures with few shadows. (Photographed on March 17, 2020)

Hyakuri Air Base Runway 21 Afternoon Departure
The aircraft which taking off from the Runway 21 makes a left turn toward the airspace and shows the lower surface toward the sun, so light shines on the lower surface of the aircraft from late autumn to winter in the late afternoon.
(Photographed on October 26, 2020)

Hyakuri Air Base Runway 21 Afternoon Departure
In the afternoon of Hyakuri, the west side of the runway will be in front of the light. When taking off from the Runway 21, the light shines from the nose side, so it resulted in beautiful pictures without the shadows of the wings and intakes. From this position, by combining a full-frame camera with a 500mm lens, the sides of the phantom fit snugly into the frame. (Photographed on May 27, 2019)

FINAL LAYOUT OF COCKPIT IN DETAIL

F-4EJ Kai 77-8395

1. Full view of the front seat main instrument panel. The square monitor on the left of the H.U.D is the radar indicator unit, and the round monitor on the right is the RWR indicator. You can see the Armament Control Panel at the bottom left of the panel (indicator). **2.** Around the control stick. **3.** Full view of the left side console. The grip in the center of the photo is the throttle lever. You can read the display of IDLE, MIL (military), and MAX. **4.** Right side console. TACAN and UHF / VHF related operation panels are placed. **5.** Around the front seat (Martin Baker Mk.H7). You can also see the details on the back of the rear instrument panel.

1. The anti-glare part of the front seat seen through the windshield. An angle that is hard to see normally. **2.** Around H.U.D. At the top left of the screen is the standby compass. **3.** A side view of the rear of the front seats. Wiring that connects to the meter on the rear seat instrument panel. **4.** Full view of the rear seat main instrument panel. The round monitor on the upper right of the board is the RWR indicator, and the square monitor on the lower center is the radar indicator unit. **5.** Full view of the rear seats.

1. Around the control stick in the rear seat. **2.** Rear left side console. The throttle lever is located on the far left compared to the front seats, but the grip is extended to the front. **3.** Right side console. There is a joystick for radar operation. **4.** CALIBRATION DATE in the back of the right console. **5.** Details behind the rear seats. You can see the safety struts of the canopy operating cylinder. **6.** Full view of the rear seats. Pay attention to each positional relationship. Slightly emphasized by a mid-angle lens, however it is actually a very small space.

PHOTO FILE OF THE 301ST SQUADRON

Hyakuri-Nyutabaru-Hyakuri

F-4EJ Kai 321 taxiing toward Hyakuri Air Base Runway 03. The paint of this aircraft is the old paint light gull gray. As you can see from the number of stars on the scarf of the unit mark, it belongs to the 5th Air Wing of Nyutabaru Air Base. ASM-1 PTM ammunition is equipped on the armament pylon on the left. (Photographed on February 20, 1995: Akira Koyama)

The operation of the Phantom in the Japan Air Self-Defense Force lasted for half a century, but in 1992 the specification of the exterior painting was changed, and the impression had been changed completely since then. Recently, many enthusiasts have never seen the paint of light gull gray and insignia white. Here, we brought old photographs as clues to know the colors and markings of those days. We also picked up photos of the T-33A which was used before, and scenes of daily training which are nostalgic for the spotters at Hyakuri Air Base and Nyutabaru Air Bases.

1981-1982

T-33A belonging to the 7th Air Wing at that time taxiing in Komatsu Air Base on November 6, 1981. Chaff dispensers are mounted on the pylon on both wings. The basic paint of the aircraft is silver (FS17178). The cramped star stenciled on the scarf in the unit mark is interesting. (Photo by Eiki Nakashima)

T-33A 668 arrived at Komatsu Airport on December 18, 1981. This aircraft is also from the time when it belonged to the 7th Air Wing, and there are seven stars on the scarf worn by the unit mark frog. The aircrafts with the radio call number (serial number) in the 600s are not made by Kawasaki, but are aircrafts provided by the United States. Originally, the fluorescent orange on the T-33A chip tank is only 2/3 from the front (the bright part), but the aircraft used by the TAC unit was allowed to stick the Scotchcal tape to the back. (Photo: Eiki Nakashima)

F-4EJ 37-8322, which participated in the TAC Air Meet 1982. It is the same as the previous year's painting pattern in which the plane was painted diagonally, but it seems that it was used properly depending on the weather, using a combination of two colors of light gray in addition to medium blue. (May 21, 1982 Photo: Eiki Nakashima)

1983-1984

F-4EJ 57-8370 taxiing in the snowy Komatsu Air Base toward the runway 06. The 600 gallon center tank (unlike the later High G tank) is insignia white. The armament pylon is equipped with a launcher for the AIM-4D Falcon. The outer pylon on the left is equipped with the J / ALQ-6 ECM pod, which was not installed on all F-4EJ aircraft, but only on some refurbished aircraft.
(Photographed on January 26, 1983 : Eiki Nakashima)

F-4EJ 07-8435 which participated in TAC Air Meet 1984. This year's painting was light gray with low visibility.
The underside of the nose is painted with anti-glare on the top and False Canopy. (May 21, 1984, Komatsu Air Base. Photo: Eiki Nakashima)

F-4EJ 77-8403, taken at Komatsu Air Base on November 5, 1984. The painting of TAC Air Meet of the same year remained. False Canopy, which deceives the attitude of the aircraft, is realistically painted on the underside of the nose. (Photo: Eiki Nakashima)

F-4EJ 37-8308 equipped with the A / A 37U-15 toe target system. It was also called Combat Dirt because it was able to move to some extent following to the movement of Target tug unlike the previous vanner target.
(November 1988, Nyutabaru Air Base. Photo: Eiki Nakashima)

F-4EJ 97-8415 participated in the TAC Air Meet taken at Komatsu Air Base on November 10, 1989. The competition was air-to-air shooting against dirt targets, and the black tail, which later became a tradition of the unit, was adopted for the first time. "Amigo" on the fuselage is the call sign at that time. The two stars on the intake vane mean the Captain (Lieutenant Colonel) boarding.
(Photo: Eiki Nakashima)

The aircraft that participated in the TAC Air Meet held at Komatsu Air Base on November 4, 1989. The shark teeth drawn on the nose had individuality for each aircraft. The illustration on the right intake vane is a Phantom Boy holding an AIM-7E and carrying an AIM-9L and a Vulcan gun. (Photo: Eiki Nakashima)

1988-1989

F-4EJ 57-8372 taxiing on the taxiway at the snow-fluttering Tsuiki Air Base towards the Runway 25. It seems that the AIM-9L Sidewinder's live ammunition is mounted inside the armament pylon on the right side.
(February 18, 1988 Photo: Akira Koyama)

F-4EJ takes off from the Runway 10 for the exhibition flight of the Nyutabaru Air Base Festival held on November 25, 1990. A formation take-off with three aircraft, which is rare now. All three aircraft have the same year's Air Combat Meet paint. (Photo by Tsuneji Kuwahara)

F-4EJ 97-8415 landed on the Runway 10 after the exhibition flight. The vertical stabilizer has the same black tail as the previous year's TAC Air Meet 1989, but the part on the fuselage where the call sign was written has five stars representing 5th Air Wing. (November 25, 1990 Photo: Kuwahara Tsuneji)

The unit 367 landed on the Runway 10 after the exhibition flight. The diameter of the main canopy of the drag chute is about 4.8m. (November 25, 1990 Photo: Tsuneji Kuwahara)

F-4EJ unit 419 taken on April 21st 1993 in the line at Nyutabaru Air Base. The newly introduced air superiority camouflage paint is brand new. At that time, the specifications of the exterior painting of F-4EJ / EJ Kai were being changed, and there were two types of painting specification aircrafts on both EJ and EJ Kai.
(Photo: Isami Akiyama)

F-4EJ Kai takes off the Runway 28 of Nyutabaru Air Base in a formation. The difference between the old painting specifications and the new air superiority camouflage painting is obvious. Perhaps they are conducting air-to-ground bombing training, the armament pylon is mounted on a CBLS200 dispenser. (April 21, 1993 Photo: Isami Akiyama)

The line of the 301st Squadron taken at Nyutabaru Air Base on April 22, 1993. Various painting aircrafts are lined up, from the front, 1993 TAC Air Meet painting aircraft, old painting specification aircraft, 1992 TAC Air Meet painting aircraft, air superiority camouflage painted aircraft, old painting specification aircraft. (Photo: Isami Akiyama)

On November 15, 1993, F-4EJ Kai was taxiing towards Nyutabaru Air Base Runway 28. Although it is an old painting specification, it can be recognized that it is the Kai because there is no J / APR-2 black antenna on the front edge of the main wing. The AIM-9M training bullet is mounted on the left armament pylon.
(Photo: Isami Akiyama)

TAC Air Meet 1994

(Photo : Isami Akiyama June 15, 1994)

F-4EJ Kai 97-8421 on the line at Komatsu Air Base. Although it is an air superiority camouflage painted aircraft, there is no large-scale special painting. At that time, there was a case of F-15, and it was recognized that it was difficult to remove the paint applied to the matte exterior paint. "SU (Sukhoi) Eaters" is written on the vertical stabilizer. (June 15, 1994 Photo: Eiki Nakashima)

F-4EJ Kai 384 at TAC Air Meet held at Komatsu Air Base in 1994. Since the TAC was an organized battle following the previous one in 1992, the old painting specification aircraft was made low visibility, but the color of the landing gear door and so on suggest that the underside of the aircraft remained insignia white.

An identification-painted aircraft photographed at Nyutabaru Air Base on April 25, 1996. There were red (reddish brown?) and black, and there were at least two aircrafts for each color (red 37-8316 / 47-8329, black 47-8324 / 67-8389). Since the TAC Air Meet of this year was also an organized battle, it may have been a virtual enemy aircraft assuming aggressor squadron. (Photo: Eiki Nakashima)

TAC Air Meet 1996

The TAC Air Meet held at Komatsu Air Base in May 1996 was an organized battle, but since all the participating aircrafts of the 301st Squadron were air superiority camouflage painting, no large-scale special painting was applied. There were just put a personal mark with Jason as a motif on the intake vane. The new air superiority camouflage had a high low visibility effect, but it seems that it was related to the thought that "the paint applied to the matte airframe surface is difficult to remove" at that time. Perhaps the labor of the maintenance staff would have been taken into consideration as well. The photo shows the captain's aircraft, F-4EJ Kai 77-8402. (June 2, 1996 Photo : Eiki Nakashima)

TAC Air Meet 1997

The TAC Air Meet held at Nyutabaru Air Base this year is 2 to 2 anti-fighter battle against the Tactical Fighter Training Group. The 301st Squadron participated in the air superiority camouflage paint, which had a high degree of perfection, but designed a large white and gray monotone V mark on the vertical stabilizer. (Meaning Victory's V and 5 Air Wing's 5 = V). The photo shows the captain's aircraft F-4EJ Kai 97-8421 with two stars in the vertical stabilizer. (May 27, 1997 Nyutabaru Air Base Photo: Eiki Nakashima)

And to the 2000s ...

The 301st Squadron T-4, January 17, 2005 Nyutabaru Air Base (Photo: Hideyuki Ogata)

The 301st Squadron F-4EJ Kai, January 17, 2005 Nyutabaru Air Base (Photo: Hideyuki Ogata)

2010-2016

The 301st Squadron F-4EJ Kai 57-8354, December 19, 2010 Nyutabaru Air Base Festival (Photo: Akira Koyama)

F-4EJ Kai 17-8438 taken at Tsuiki Air Base on March 10, 2010. Type 93 Air-to-Ship Missile ASM-2 is installed in the armament pylon. Only the guide part at the tip is a live PTM bullet, and the bullet part painted in red and bright yellow is a dummy. The entire live ammunition is painted with light gull gray FS16440. The armament pylon on Phantom cannot be structurally equipped the SRM launcher in such a mounting form. The RF-4E is equipped an ECM pod here because it does not have the ability to operate missiles and does not need to be used. (Photo: Shigeru Eto)

At Nyutabaru Air Base, construction of a temporary runway parallel to the south side began in August 2009 due to the renovation work of the runway, and was completed by March 2010. The photo was taken when the temporary runway was in operation (February 15, 2011). Volcanic ash from Mt. Kirishima's Shinmoedake, which erupted on January 26, 2011, is dancing like dust. (Photo: Hideyuki Ogata)

June 22, 2011, F-4EJ Kai. (Photo: Hideyuki Ogata)

TAC Air Meet 2013

The 2013 TAC Air Meet was held from September 24th to October 11th (including preliminary days) at both Hyakuri and Misawa Air Bases. The purpose of this year's event is "to improve the fighting ability of the fighter squadron" in 2 to 2 anti-fighter combat, and the fighter squadron controlled by the Aircraft Control and Warning Wing intercept the F-15s of the opposing unit Aggressor Squadron. (Photo by Eiki Nakashima)

In October 2016, the 301st Squadron moved to the old home of Hyakuri Air Base, replacing the 305th Squadron equipped with the F-15, and was re-incorporated into the 7th Air Wing. The photo shows F-4EJ Kai 97-8423, heading for Hyakuri as the lead on October 5, 2016 (Photo: Hideyuki Ogata)

To the old home, Hyakuri .....

On October 31, 2016, the main team takes off toward Hyakuri as a large numbers of people concerned are sending off. As a result, all phantoms other than those belonging to the Air Development and Test Wing (ADTW) were gathered at Hyakuri Air Base. (Photo: Hideyuki Ogata)

January 25, 2011, The 301st Squadron F-4EJ Kai 57-8354 Nyutabaru Air Base (Photo: Isami Akiyama)

Behind the scenes

- **Re-maintenance of drag chute**
- **Equipment on the flight line**
- **Self-propelled engine starter KM-3**
- **3t towing vehicle for aircraft**

(Photo : Isami Akiyama)

3t towing vehicle for aircraft

Weight: 5250kg

Length: 3845mm

Width: 1900mm

Height: 1730 mm

Engine: In-line 6-cylinder gasoline

Displacement: 4230cc

Maximum output: 67ps / 2100rpm

Number of gears: forward 4 / backward 1

Manufacture: Toyota Industries

Designated color of exterior coating: OD color, standard value (Munsell value): 7.5Y 3/1

Re-maintenance of drag chute
@ Hyakuri Air Base

The work of the Lifesaving equipment team of the Field Maintenance Squadron of the Maintenance Supply Group

After landing, the drag chute released at the runway end dump point will be recovered by the grand crew and make re-maintenance at the Field Maintenance Squadron of the Maintenance Supply Group, commonly known as the "parachute shop." Let's take a look at their work at Hyakuri Air Base here.

The drag chute is lifted and hung in the drying tower (photo **A**), dried thoroughly, and then packed in a canvas pack. There are two ways to do this stuffing: using a metal mold and stuffing with a short bat-like stick (photo **B** to **E**) and manually stuffing with a foot (photo **1** to **3**). The mechanism of the F-4's drag chute is that the guide canopy held down by the pop-up door is released backward by the force of the spring installed at the same time as the door is released, and this receives the wind and pulls out the main canopy. The spring inside the guide canopy and the guide canopy are being held down (photo **F**). Cover this with a canvas lid and temporarily fix it with a wire (**a** in photo **G** & **I**) with a remove tag (**c** in photo **G** & **I**) at the tip. After setting it on the aircraft, if the wire is pulled out before the flight, the guide canopy will be released inside by the power of the spring, and it will be held down by the pop-up door and be in a standby state. If the yellow riser (**b** in photo **G** & **I**) is taken out when closing the pop-up door, it will be a mark that the chute has been stored. When mounting the packed chute into the container, push open the hook called the jaw at the back of the container with a special tool (**d** in photo **H**), connect the mounting ring at the tip of the riser (**e** in photo **H**), and then push it in. The diameter of the F-4 drag chute (main umbrella) is about 4.8 m.

Equipment on the flight line

Let's take a look at some of the equipments found on the flight line of F-4.

a. In-vehicle carbon dioxide fire extinguisher.
b. Standard chock of the 301st Squadron.
c. Cover for all temperature sensors.
d. Equipment on the intake cover.
Record book etc in black bag.
All temperature sensor cover. Headset, etc.
e. Seven tools in the tool box.
f. Intake cover.
g. Safety struts :
Drag brace cylinder for the front landing gear on the left.
Side brace cylinders for main landing gear in the middle and the right.

Self-propelled engine starter KM-3

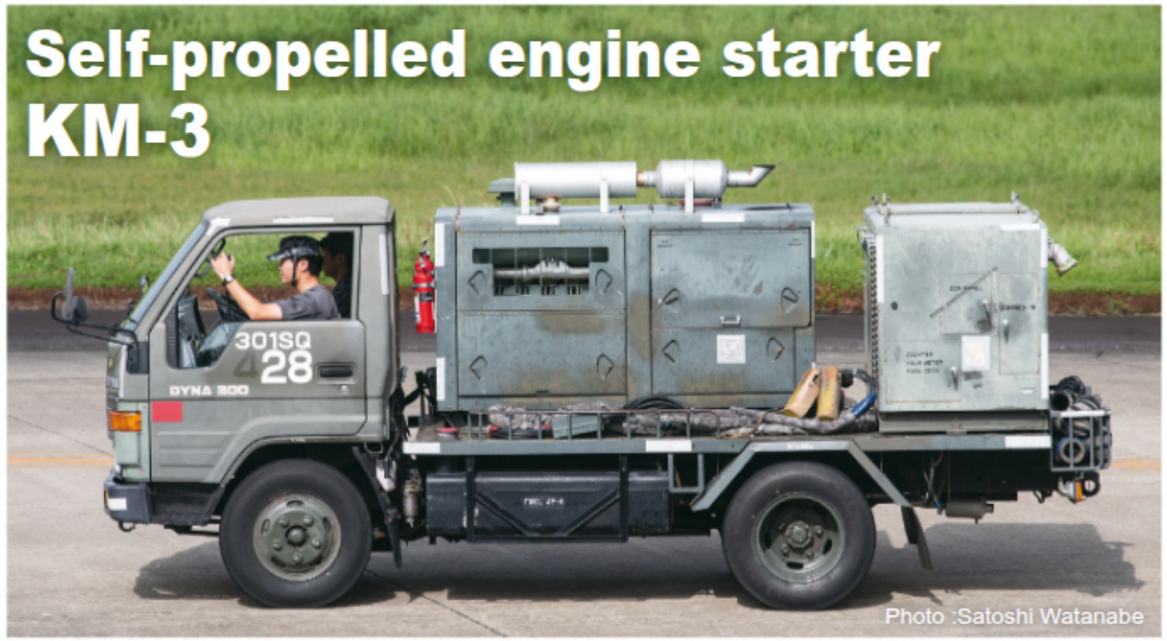


Photo :Satoshi Watanabe

The F-4 requires an external power source and compressed air to start the engine. The self-propelled starter vehicle KM-3 supplies this. The structure is just to put a generator and a compressor on the back of the vehicle. Base vehicles range is from Toyota, Nissan, Mitsubishi, Hino, Isuzu, etc. When I, the writer, in the 301SQ, Isuzu Elf was the base car.

The body color is unified with the OD color, but since there was a time when the ground equipment was bright yellow, it is necessary to confirm the age if you are painting it on your model.

Since the generator and compressor are heavy and the center of gravity is high, it is easy to roll over if you turn the steering wheel suddenly. Need to be careful when driving this vehicle. Probably because it exceeds the load weight of the base car, there is no license plate so it can only run inside the base. To drive, you need a driving permit issued in the base for each type of vehicle.

It is equipped with a 30KVA generator and a gas turbine compressor. It has two power cables on the left and right and can supply to two aircraft, but since there is only one compressor air hose, only one aircraft can start the engine at the same time.

The fundamental problem is that the hose is not long enough to reach the outside of the wing tip, so even if there are two hoses, even if the KM-3 is placed in the middle of the two F-4s, the hose will not reach. If only power is needed during pre-flight inspection, it is possible to place the vehicle in the center of the two and send only power to the two.

When starting the engine, place the vehicle on the right side of the fuselage, slightly outside in front of the 370 gallon fuel tank under the wing. When I (the author) was operating the KM-3, I was backing up with the tip of the tank as a mark with the mirror on the left. Since the rear-view mirror cannot be seen on the KM-3, check the rear view with the side mirror. The vehicle is placed on the right because the operation panel of the KM-3 is on the left side of the vehicle.

After placing the vehicle, connect the power cable to the aircraft. Since the engine starts from the right, connect the air hose to the right engine first.

The power cable in the photo is wrapped in something like a whitish cover, which is the same as the air hose cover. Since the power cable is made of rubber, it is easily worn because it drags the ground frequently. Therefore, it is protected by a cloth air hose cover. This makes it heavier, but very durable.

The pilot gets in and supplies power with the "power supply" hand sign, and then starts the compressor. If the compressor was started too early, it would not be as fuel efficient as the generator, so they started it at the last minute to save fuel.

Keeping an eye on the exhaust thermometer after starting the compressor. The KM-3 is prone to abnormally high temperatures, so if the exhaust temperature rises too high, need to press the exhaust temperature limit button to lower the temperature. I have had an experience of causing a hot start before - when I took my eyes off, it raised a flame from the exhaust port at the top of the compressor. I dealt with it immediately, so I got nothing but I was afraid at the time. The KM-4 for T-2 / F-1 does not have an exhaust temperature limit button because it automatically controls the exhaust temperature.

When the right engine starts by sending air with the sign "Send air to the right engine", stop the air once, replace the hose to the left engine, and start the left engine. When the left engine starts, stop the air, stop the compressor, and quickly retract the hose.

When the hose is completely stowed, a signal to "remove the power" is given, so turn off the power, disconnect the power cable, and stow it. After storing, immediately move the KM-3 to a place where the course of the aircraft is not blocked.

The engine starter vehicle is the most numerous traveling equipment in the squadron. It was also used as a means of transportation for maintenance personnel, such as waiting at the runway end, checking the last chance, and collecting drag chutes.

Gas turbine compressor

Oil type
Output : 153 Air pressure
Discharge capacity : 3.5 kg / cm3 (absolute)
Temperature : 195 °C
Specified color : OD color *
Production: Mitsubishi Heavy Industries
* Munsell value: 7.5Y 3/1

Generator

Drip-proof protection type
Capacity : 30KVA
Rated voltage : AC115 / 200V
Rated current : 87A
Rated frequency : 400Hz
Specified color : OD color *
Production: Nissan Diesel

3t towing vehicle for aircraft

Satoshi Watanabe

The 3t towing tractor for aircraft (3t TUG) is almost the same as Toyota's 3.5t towing tractor for private use. There was a time when it was called 3.5t when switching from the old 3t TUG, but now it is unified with the name of 3t TUG. The engine is a gasoline straight-six engine 4230cc. Maximum output 67ps / 2100rpm. Weight 5490 kg. Maximum traction force 34,300N. The maximum speed is 27km / h. Fuel tank capacity 100 liters. The fuel consumption is not in the catalog, but I think it is about 3km / L.

Initially, it was yellow (yellow-orange) like the one currently used by the Maritime Self-Defense Force, but now it is unified to OD color like other equipment. The maximum speed is slow, but the traction force is strong, so it is no exaggeration to say that most things can be pulled. There is an anecdote that when a construction dump truck got stuck and got stuck, it was easily pulled up with a rope and surprised the dump truck driver who said, "There is no way to get up with such a small car." I myself had a privately owned car (2000cc) stuck in the parking lot on the base and pulled it up with a 3t TUG.

Not only aircraft, but also ground equipment that needs towing will be towed by TUG. Although the speed is slow, it pulls such a heavy object when towing. If you step on the brake suddenly, TAG will be pushed by the very heavy aircraft. The towing aircraft never stops and the towbar and the aircraft get damaged. It must always be driven slowly. Sudden braking is strictly prohibited.

The old 3t TUG did not have power steering, but since it became the type of 3t TUG in the photo, it was equipped with power steering, so it was possible to operate the steering wheel while facing backwards, making it very easy to tow the aircraft.

When towing an aircraft with it, there are two rotating parts on the front running gear and on the connection part of TUG, so when backing up, need to turn the handle in the direction you want to make the aircraft turn to.

Compared to other fighters, the F-4 has a wider space between the main landing gears "as well as" a wider tread. Therefore, there is a "longer" time lag from the operation of the TUG to the reaction of the aircraft. It is difficult to tow because the operation must be started earlier. The F-15's front running gear operation angle limit is 60 degrees, but the F-4's front running gear can be turned 360 degrees. However, it's still difficult, and the maintenance staff of the F-4 Squadron, who regularly tow the F-4, were generally good at towing.

LOOK F-4 THROUGH THE ILLUSTRATIONS AND THE PHOTOS

PAINTINGS AND MARKINGS OF

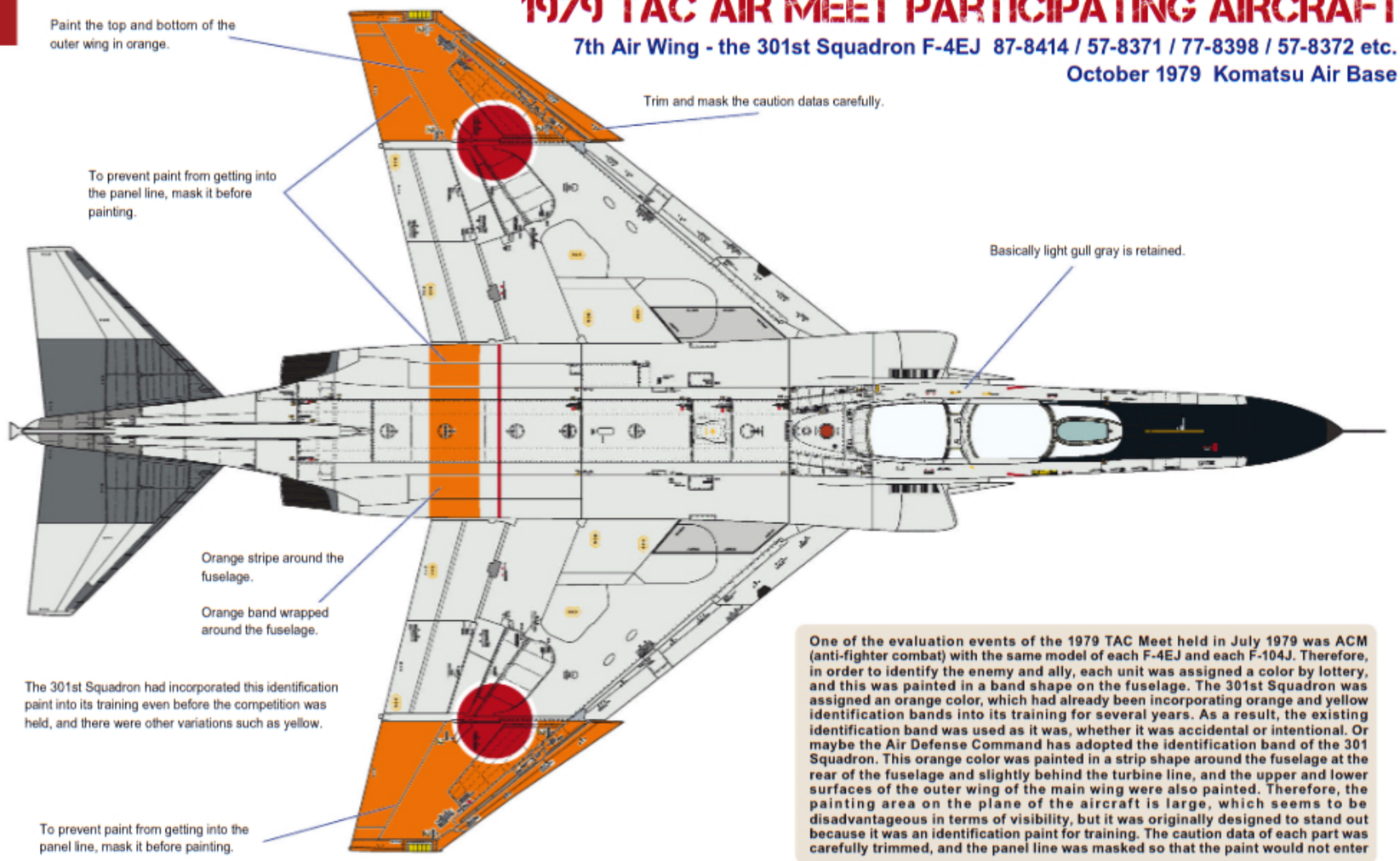
TAC AIR MEET AIRCRAFTS
VIRTUAL ENEMY AIRCRAFTS
FOUNDING ANNIVERSARY AIRCRAFTS

Aircrafts which participated in the TAC Air Meet 1992 held at Komatsu Air Base in July 1992. From the first aircraft, the 354, the 348, and the 338.

Oct. 1979 : TAC Air Meet (ACM) / Komatsu Air Base / Winner (photo / illustration) P84
Nov. 1980 : TAC Air Meet (ACM) / Chitose Air Base / Winner (photo / illustration) P87
Nov. 1981 : TAC Air Meet / Komatsu Air Base (photo / illustration) P92
Dec. 1983 : Virtual Enemy Aircraft Special Painting / Hyakuri Air Base (photo / illustration) P119
1992 & 1994 : Virtual Enemy Aircraft for pre-training of the TAC Air Meet / Nyutabaru Air Base (photo / illustration) P97
Jul. 1992 : TAC Air Meet / Komatsu Air Base / Winner (photo / illustration) P102
Oct. 1993 : The 301st Squadron 20th Anniversary paintedaircraft / Nyutabaru Air Base (photo / material) P124
May. 1995 : TAC Air Meet / Komatsu Air Base (photo / illustration) P112
Dec. 1997 : Nyutabaru Air Base 40th Anniversary painted aircraft / Nyutabaru Air Base (photo) P128
Oct. 2003 : The 301st Squadron 30th Anniversary Painted Aircraft / Nyutabaru Air Base (photo) P128
Jul. 2004 : JASDF 50th Anniversary painted aircraft / Nyutabaru Air Base (photo) P129
Oct. 2013 : The 301st Squadron 40th Anniversary painted aircraft / Nyutabaru Air Base (photo) P130

1979 TAC AIR MEET PARTICIPATING AIRCRAFT

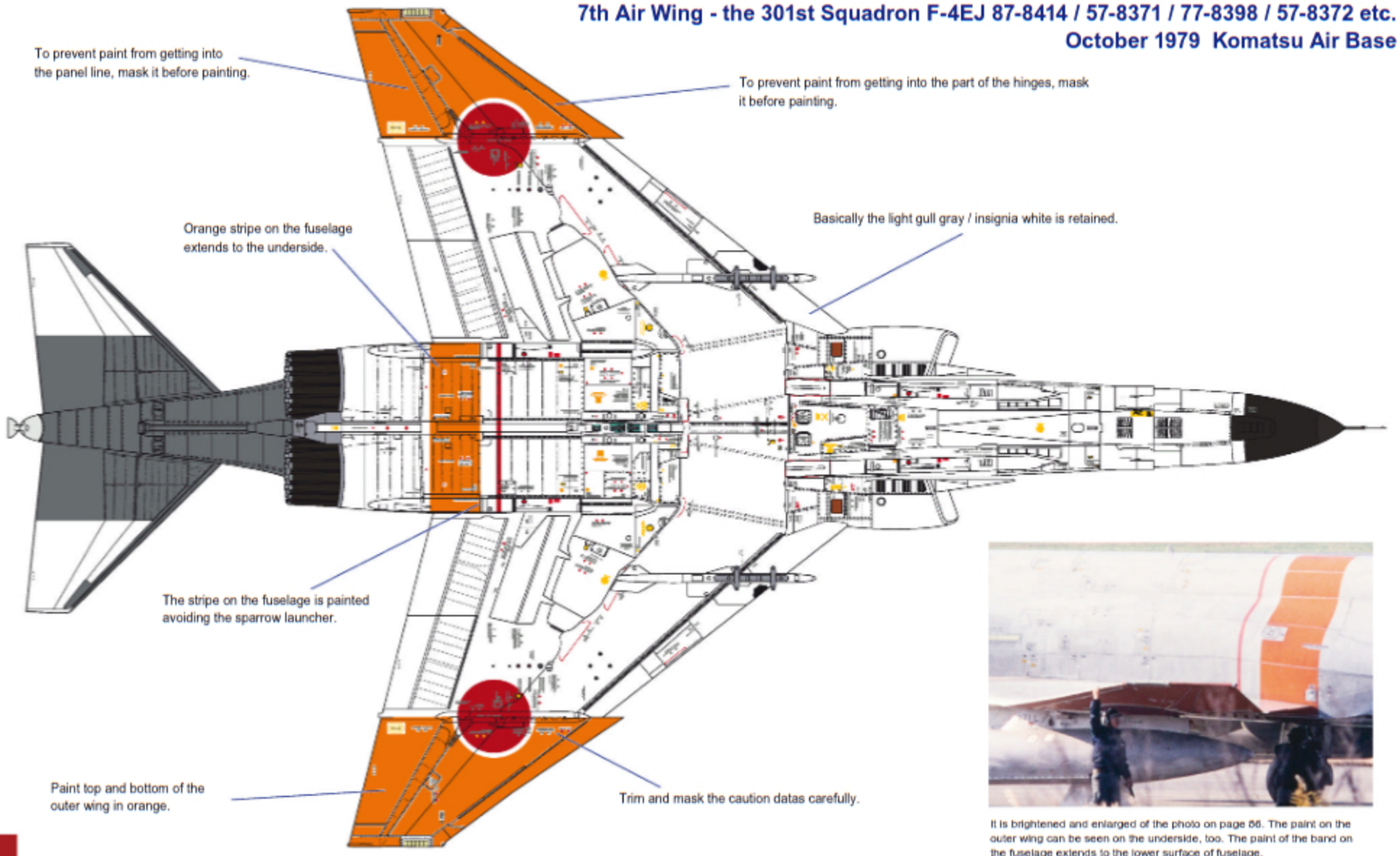
7th Air Wing - the 301st Squadron F-4EJ 87-8414 / 57-8371 / 77-8398 / 57-8372 etc.
October 1979 Komatsu Air Base


Paint the top and bottom of the outer wing in orange.
Trim and mask the caution datas carefully.
To prevent paint from getting into the panel line, mask it before painting.
Basically light gull gray is retained.
Orange stripe around the fuselage.
Orange band wrapped around the fuselage.
To prevent paint from getting into the panel line, mask it before painting.

The 301st Squadron had incorporated this identification paint into its training even before the competition was held, and there were other variations such as yellow.

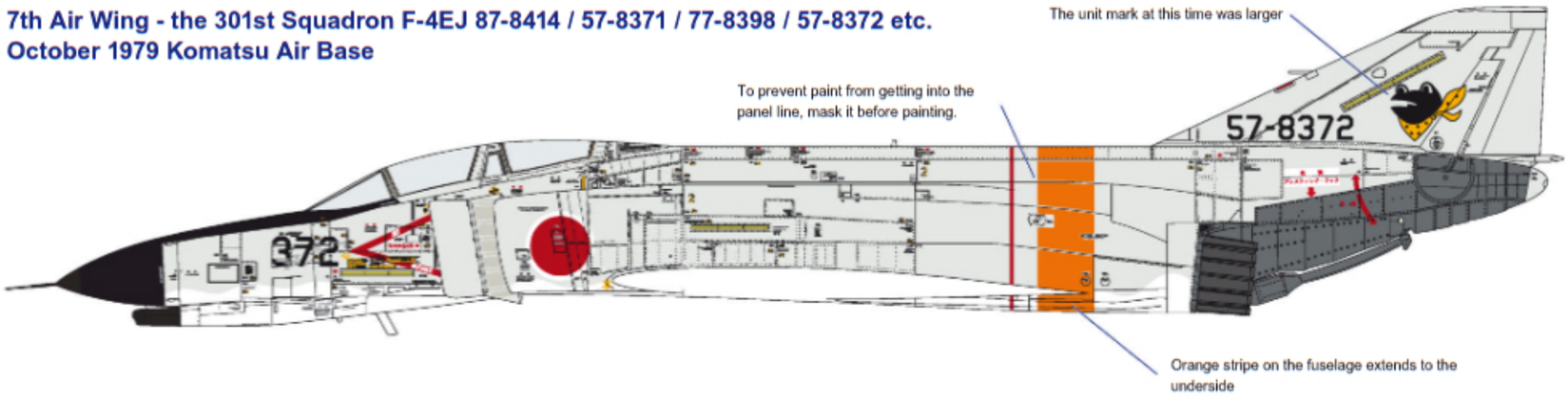
One of the evaluation events of the 1979 TAC Meet held in July 1979 was ACM (anti-fighter combat) with the same model of each F-4EJ and each F-104J. Therefore, in order to identify the enemy and ally, each unit was assigned a color by lottery, and this was painted in a band shape on the fuselage. The 301st Squadron was assigned an orange color, which had already been incorporating orange and yellow identification bands into its training for several years. As a result, the existing identification band was used as it was, whether it was accidental or intentional. Or maybe the Air Defense Command has adopted the identification band of the 301 Squadron. This orange color was painted in a strip shape around the fuselage at the rear of the fuselage and slightly behind the turbine line, and the upper and lower surfaces of the outer wing of the main wing were also painted. Therefore, the painting area on the plane of the aircraft is large, which seems to be disadvantageous in terms of visibility, but it was originally designed to stand out because it was an identification paint for training. The caution data of each part was carefully trimmed, and the panel line was masked so that the paint would not enter

7th Air Wing - the 301st Squadron F-4EJ 87-8414 / 57-8371 / 77-8398 / 57-8372 etc.
October 1979 Komatsu Air Base


To prevent paint from getting into the panel line, mask it before painting.
To prevent paint from getting into the part of the hinges, mask it before painting.
Orange stripe on the fuselage extends to the underside.
Basically the light gull gray / insignia white is retained.
The stripe on the fuselage is painted avoiding the sparrow launcher.
Paint top and bottom of the outer wing in orange.
Trim and mask the caution datas carefully.

It is brightened and enlarged of the photo on page 86. The paint on the outer wing can be seen on the underside, too. The paint of the band on the fuselage extends to the lower surface of fuselage.

7th Air Wing - the 301st Squadron F-4EJ 87-8414 / 57-8371 / 77-8398 / 57-8372 etc.
October 1979 Komatsu Air Base


The unit mark at this time was larger
To prevent paint from getting into the panel line, mask it before painting.
57-8372
372
Orange stripe on the fuselage extends to the underside

On December 1, 1980, F-4EJ 57-8371 was in the last chance near the taxiing end on the Hyakuri Air Base Runway 03 side. When there is a lot of traffic and the arming area is crowded, it may be done on the taxi way. The TAC painting from 1979 was left as it was, but this is also the identification painting that had already been incorporated into the training before TAC. This shooting point is along the fence on the south side of the back of the alert hangar, but currently it is not possible to enter this area (photo : Eiki Nakashima).

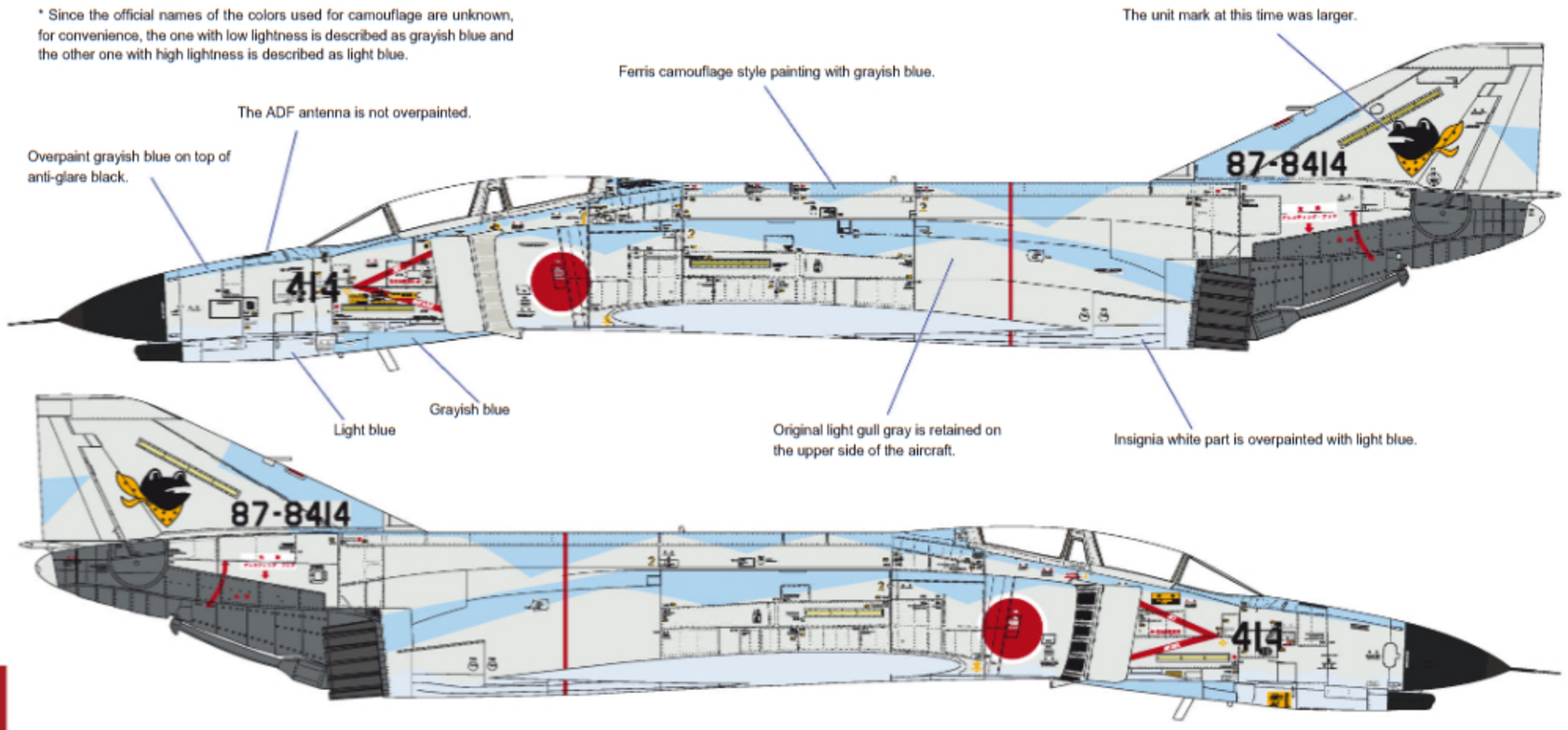
1980 TAC AIR MEET PARTICIPATING AIRCRAFT

The 1980 TAC AIR MEET held in November 1980 was an anti-fighter combat competition, so it was DACT (Dissimilar Air Combat Training) for the F-104 deployed at Misawa Base and the F-4EJ deployed at Chitose. Each participating unit introduced a paint aimed at low visibility and deception of maneuver, instead of the identification band as in 1979. The 301st Squadron entered the war with a paint that resembled the Ferris camouflage motif introduced by the U.S. Navy on a trial basis in the 1970s, aiming for low visibility and a deceptive effect that makes it difficult to determine the attitude during maneuvering. It was called "Shinsengumi" in the department. Basically, original basic paint the light gull gray on the upper surface of the aircraft is remained. The lower surface is painted light blue on the basic paint insignia white, and the upper and lower surfaces of the aircraft are painted in light blue (67-8414, 97-8425) or medium gray (57-8357, 67-8390) in a dazzle camouflage pattern. The caution datas on each part of the aircraft were carefully trimmed and left unpainted, and on the anti-glare black of the upper surface of the nose is painted over. This was also a deceptive painting aim that made it difficult to recognize the attitude by making the upper and lower designs of the aircraft similar.

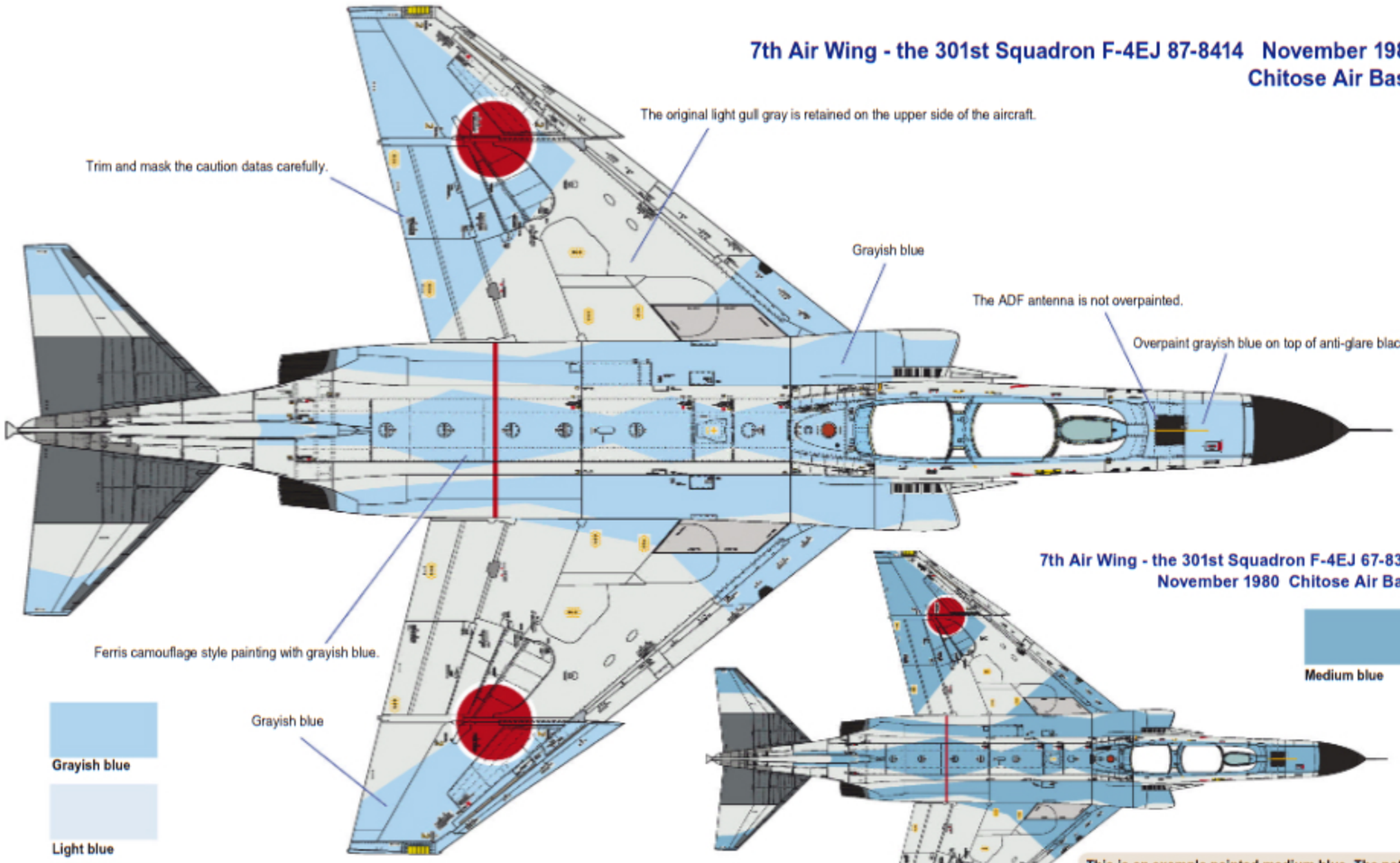
Grayish blue | Light blue | Light gray (FS16440)

7th Air Wing - the 301st Squadron F-4EJ 87-8414 November 1980 Chitose Air Base

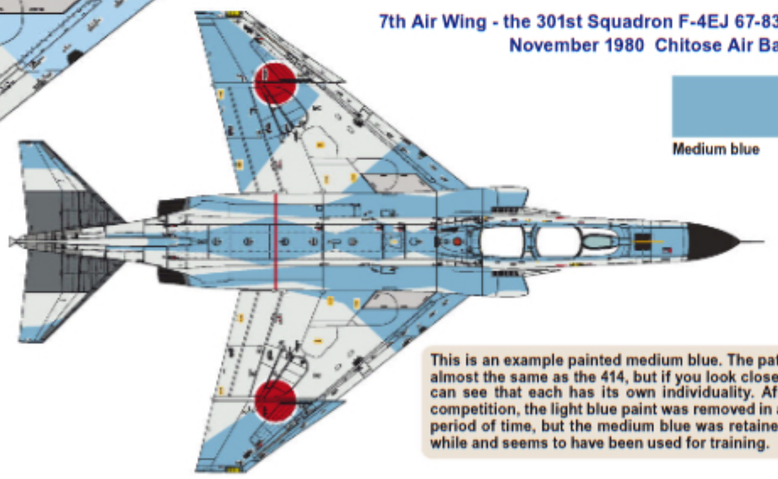
* Since the official names of the colors used for camouflage are unknown, for convenience, the one with low lightness is described as grayish blue and the other one with high lightness is described as light blue.


The unit mark at this time was larger.
Ferris camouflage style painting with grayish blue.
The ADF antenna is not overpainted.
Overpaint grayish blue on top of anti-glare black.
87-8414
414
Grayish blue
Light blue
Original light gull gray is retained on the upper side of the aircraft.
Insignia white part is overpainted with light blue.
87-8414
414

7th Air Wing - the 301st Squadron F-4EJ 87-8414 November 1980
Chitose Air Base


The original light gull gray is retained on the upper side of the aircraft.
Trim and mask the caution datas carefully.
Grayish blue
The ADF antenna is not overpainted.
Overpaint grayish blue on top of anti-glare black.
Ferris camouflage style painting with grayish blue.
Grayish blue
Grayish blue
Light blue
Light gray
(FS16440)

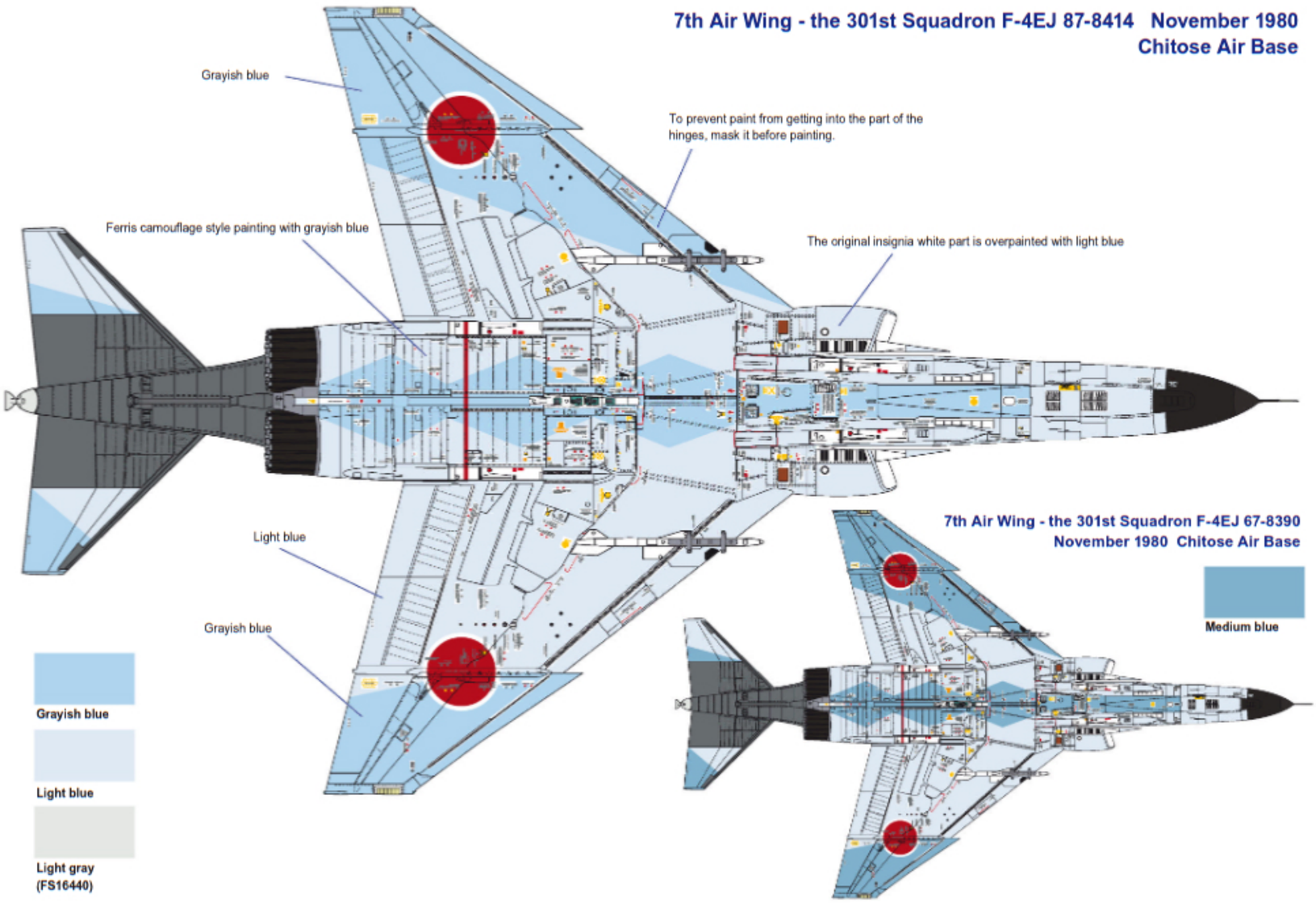
7th Air Wing - the 301st Squadron F-4EJ 67-8390
November 1980 Chitose Air Base



Medium blue

This is an example painted medium blue. The pattern is almost the same as the 414, but if you look closely, you can see that each has its own individuality. After the competition, the light blue paint was removed in a short period of time, but the medium blue was retained for a while and seems to have been used for training.

7th Air Wing - the 301st Squadron F-4EJ 87-8414 November 1980
Chitose Air Base


Grayish blue
To prevent paint from getting into the part of the hinges, mask it before painting.
Ferris camouflage style painting with grayish blue
The original insignia white part is overpainted with light blue
Light blue
Grayish blue
Grayish blue
Light blue
Light gray
(FS16440)

7th Air Wing - the 301st Squadron F-4EJ 67-8390
November 1980 Chitose Air Base

Medium blue

This is an example using medium blue (67-8390). The pattern is almost same as the 414, but if you look closely, you can see that each has its own individuality. After the competition, the light blue paint was removed in a short period of time, but the medium blue one seems to have been maintained for a while and used for training. The photo above was taken on July 9, 1981, and the photo below was taken on November 8, 1980 at Hyakuri Air Base. (Photo : Eiki Nakashima)

PHOTO PROFILE

PHOTO PROFILE

The 390 returns to the ramp area after landing on Runway 21 at Hyakuri Air Base. You can see the Ferris camouflage on the back. A launcher for the Falcon is attached to the armament pylon. December 15, 1980. (Photo: Eiki Nakashima)

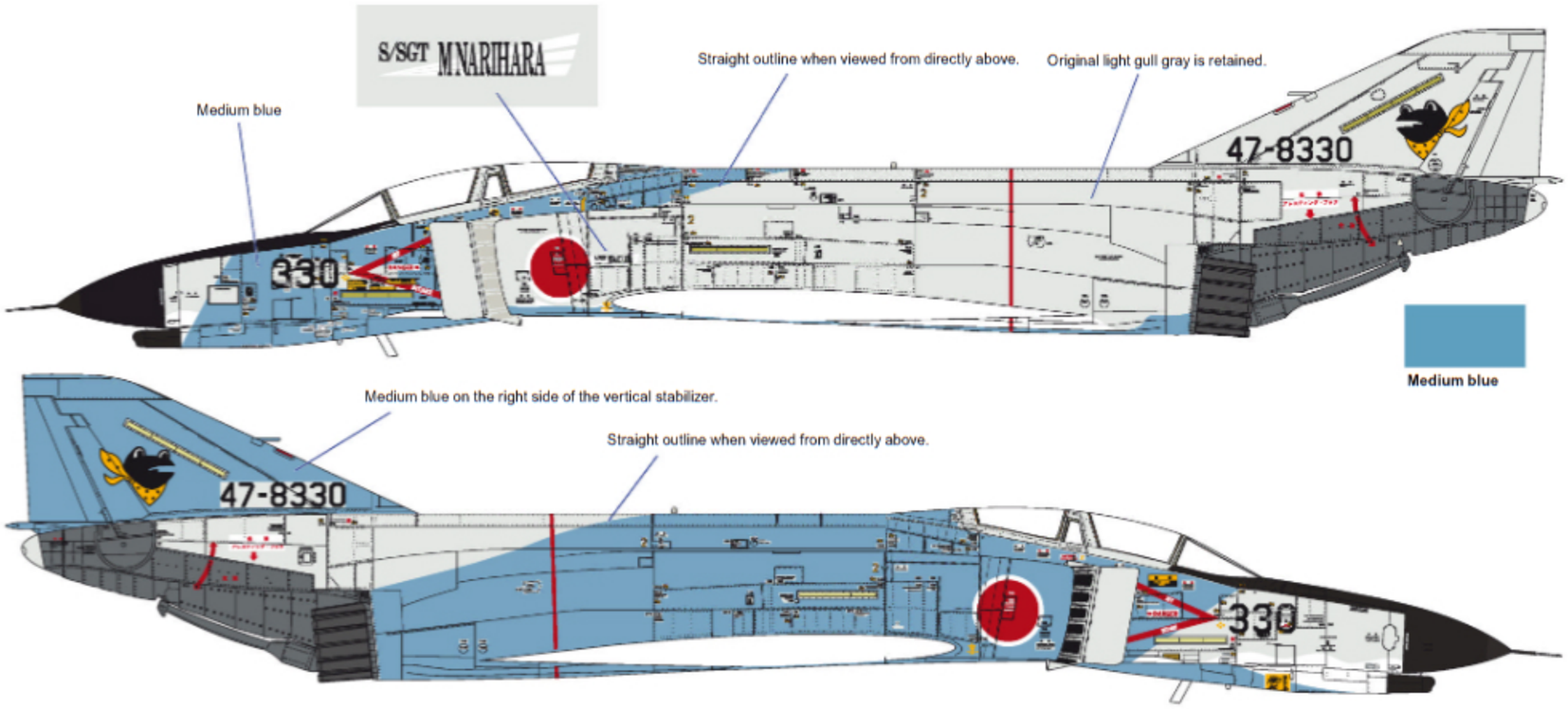
The 414 at Hyakuri Air Base on February 10, 1981. The dazzle camouflage-like painted part is light blue, and the insignia white part on the underside is overcoated with a lighter blue. This photo was taken after the ACM and has a feather-shaped base just behind the Hinomaru on the left side of the fuselage to put the crew chief's name on. (Photo : Eiki Nakashima)

The 414 taxiing for Hyakuri Air Base Runway 03 on November 8, 1980. The armament pylon is in a clean state with no visible launchers and no external tank, but if you look closely, it looks like something is mounted inside the pylon on the right side. (Photo : Eiki Nakashima)

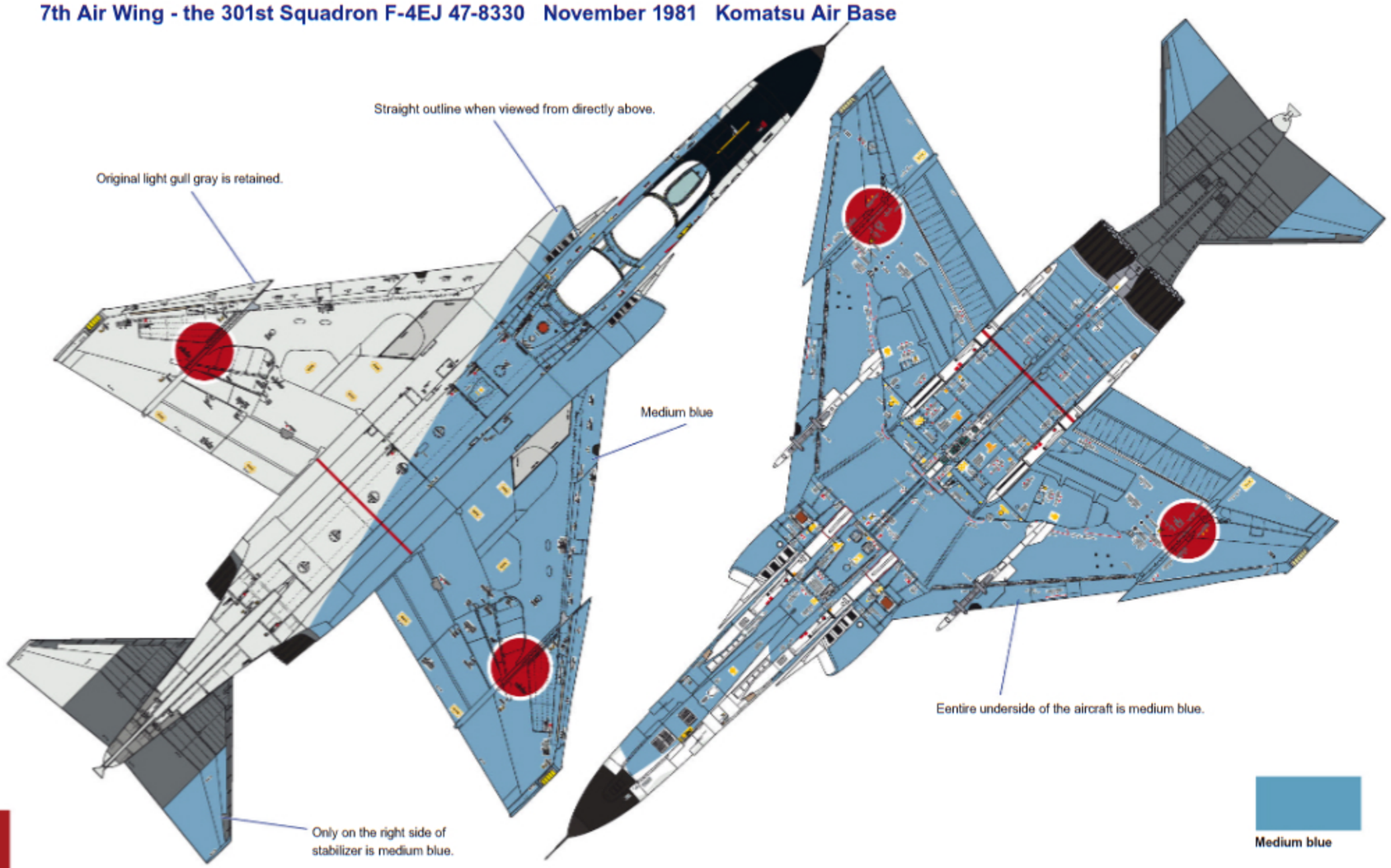
1981 TAC AIR MEET PARTICIPATING AIRCRAFT

From November 16th to 18th, 1981, the 1981 TAC MEET held at Komatsu Air Base was divided into the first part of the interception battle and the second part of the organized battle. The 301st Squadron adopted a bold painting that diagonally painted the plane of the aircraft, which seems to be due to the visual effect in close range combat. It is said that such a design has the effect of deceiving the flight attitude and direction (opinions differ depending on the pilot), and by using two colors with a large difference in brightness, one of them will be blended in to the background depending on the weather conditions. As some pilots describe it as " the sky man, the sixty percent head." It is a word that expresses that the ability to think at high altitudes declines to some extent. In such a situation, if a pilot makes a mistake in judging the turning direction and distance of the aircraft caught at the edge of the field of view even for a moment, the subsequent battlefield may be disadvantageous. In the first aircraft (47-8330), the flat surface was divided into two diagonally, but for the subsequent painting aircrafts (67-8387, 77-8403, 97-8425, 07-8435), the light gray area was reduced. The medium blue on the right side of aircrafts were 92-8330, 92-8425, 77-8403, 97-8322 (not participating in the competition), and the medium blue on the left side of aircrafts were 07-8387 and 07-8435. In the 301st Squadron, after the 1955 TAC, the crew chief's name came to be put on the three white wings designed behind the Hinomaru on the port side fuselage.

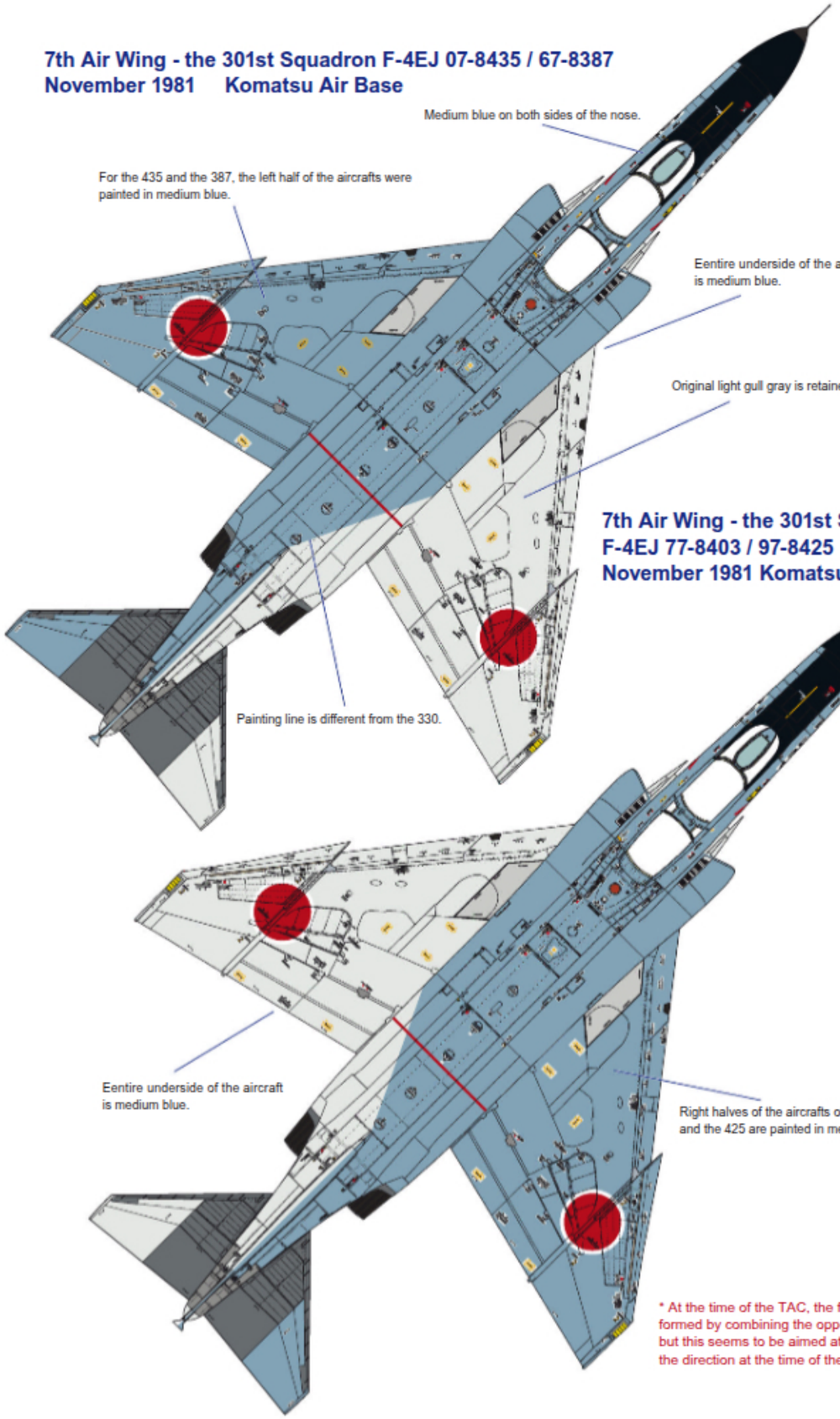
7th Air Wing - the 301st Squadron F-4EJ 47-8330 November 1981 Komatsu Air Base



7th Air Wing - the 301st Squadron F-4EJ 47-8330 November 1981 Komatsu Air Base


Straight outline when viewed from directly above.
Original light gull gray is retained.
Medium blue
Only on the right side of stabilizer is medium blue.
Eentire underside of the aircraft is medium blue.
Medium blue

7th Air Wing - the 301st Squadron F-4EJ 07-8435 / 67-8387
November 1981　Komatsu Air Base


Medium blue on both sides of the nose.
For the 435 and the 387, the left half of the aircrafts were painted in medium blue.
Eentire underside of the aircraft is medium blue.
Original light gull gray is retained.
Painting line is different from the 330.

7th Air Wing - the 301st Squadron F-4EJ 77-8403 / 97-8425 November 1981 Komatsu Air Base

Eentire underside of the aircraft is medium blue.
Right halves of the aircrafts of the 403 and the 425 are painted in medium blue.

* At the time of the TAC, the formation was formed by combining the opposite patterns, but this seems to be aimed at deceiving the direction at the time of the break.

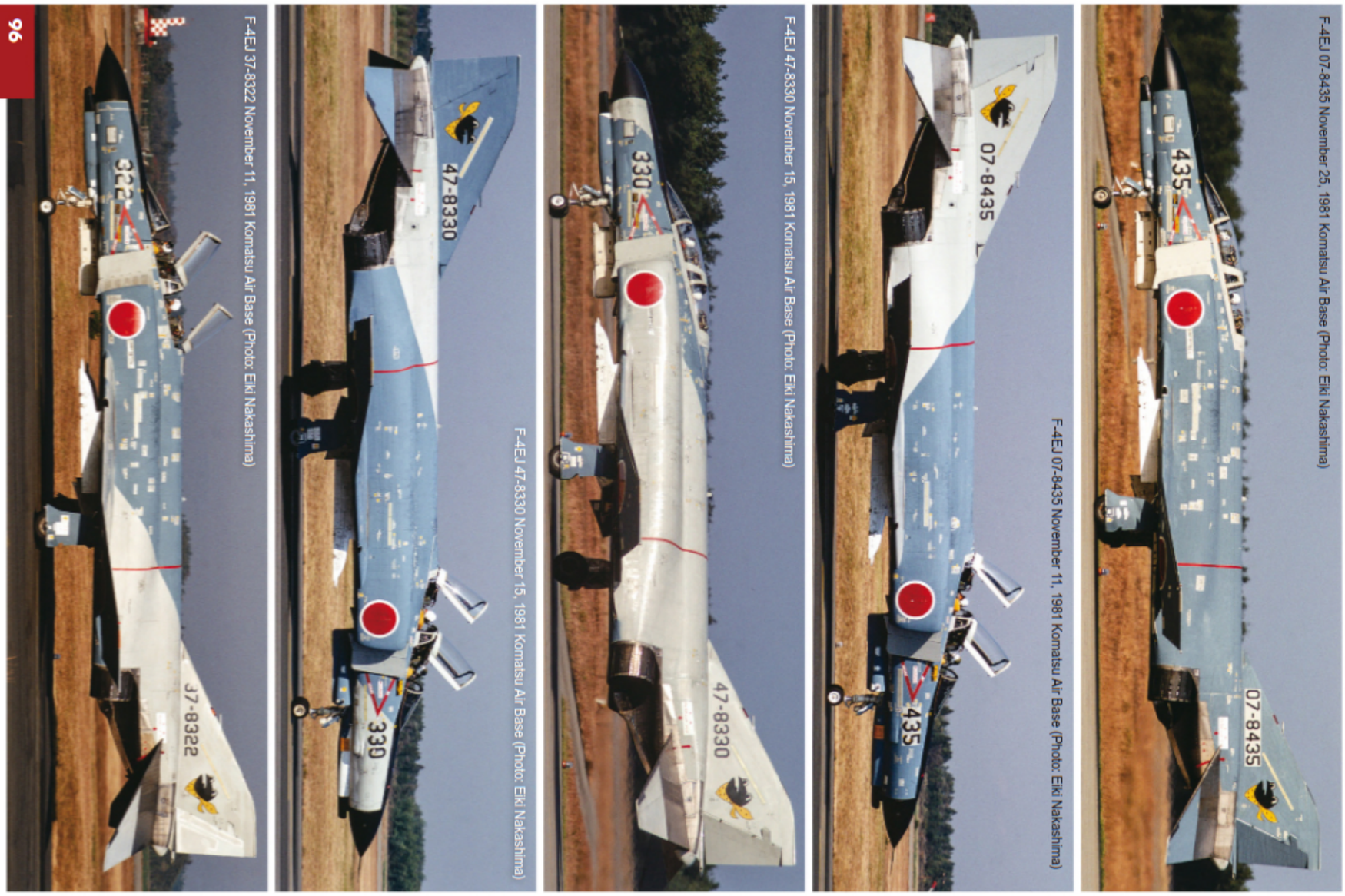
F-4EJ 77-8403 November 15, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 77-8403 November 11, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 67-8387 November 15, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 67-8387 November 13, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 97-8425 October 25, 1981 Komatsu Air Base (Photo: Eiki Nakashima)



F-4EJ 07-8435 November 25, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 07-8435 November 11, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 47-8330 November 15, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 47-8330 November 15, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

F-4EJ 37-8322 November 11, 1981 Komatsu Air Base (Photo: Eiki Nakashima)

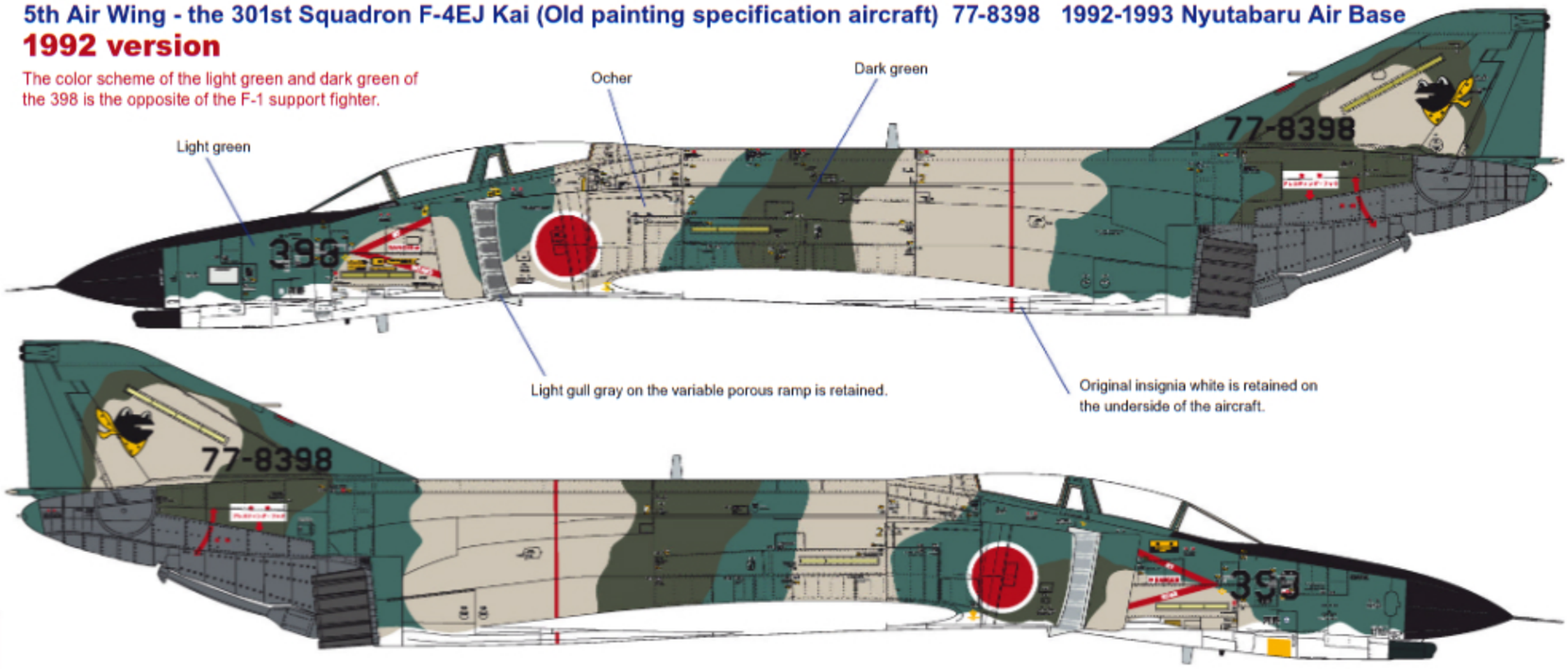
1992 & 1994 TAC AIR MEET - VIRTUAL ENEMY AIRCRAFT FOR PRE-TRAINING (F-1 PAINTING AIRCRAFT)

The organized battle of the 1992 TAC AIR MEET, "battle bomb detective coalition target interception in the high ECM environment" , was to intercept 3 RF-4Es and 4 fighter bombers (F-1) escorted by 4 escort fighters (Tactical Fighter Training Group). The 301st Squadron has introduced virtual enemy aircrafts with the silhouette of F-1 support fighter for its pre-training. Two virtual enemy aircrafts, the 77-8398 and the 97-8427, were prepared. Camouflage painting is applied to the entire upper side of the fuselage, and the plane shape of the F-1 main wing is drawn on the upper surface of the main wing according to the shape of the phantom. The ocher, light green, and dark green color lines are drafted before painting, but they are sprayed by freehand, so each aircraft has its own individuality. For the 398, the color scheme of light green and dark green is reversed. Other than that, there are no special markings, but the name of the crew chief originally on the ram air turbine part is masked at the time of camouflage painting and left as it is. Approximately two years later, at the time of the 1994 competition, an aircraft which is painted the silhouette of F-1 was introduced for the same reason. The serial number is the 47-8351. The difference from the 1992 version is that not only on the upper surface of the main wing, but also the silhouette of F-1 is reproduced on the vertical stabilizer, pursuing more reality. Another difference from the 1992 version is that the light gull gray part other than the F-1 painted part is overcoated with a matte light blue to make the silhouette of the F-4 difficult to see and to make it look more like the F-1. Hiroyuki Yano (pilot / 1st class lieutenant / pilot participating the TAC 1992), who was in charge of painting this F-1 painted aircraft (1994 version) prepared for pre-training in the TAC, looks back and says, "In the pre-training, we were also supported by the 6SQ of Tsuiki Air Base with F-1 aircraft. In the pre-training, I played the role of an enemy fighter-bomber by F-4 with that F-1. In the first place, the small F-1 was difficult to catch with the on-board radar because the Radar Cross Section (RCS) is small. Also, in organized combat, the interceptor (F-4) shot down (or chased away) the AGR F-15 acting as a support fighter and shot away most of the radar missiles by the time it confronts the F-1 as a fighter-bomber. So, it had to shot down with only the remaining infrared missiles and guns. The deciding factor for winning or losing in a short-range battle is how quickly you will be able to see the opponent in sight and occupy a superior position. In the pre-training, in order to develop the visual detection ability of the participating pilots, a virtual enemy aircraft that was closely reproduced the shape and color of slim and difficult-to-find F-1 was required. "

5th Air Wing - the 301st Squadron F-4EJ Kai (Old painting specification aircraft) 77-8398 1992-1993 Nyutabaru Air Base

1992 version

The color scheme of the light green and dark green of the 398 is the opposite of the F-1 support fighter.



5th Air Wing - the 301st Squadron F-4EJ Kai (Former painting specification aircraft)
77-8398 1992-1993 Nyutabaru Air Base
1992 version

- The color scheme of the light green and dark green of the 398 is the opposite of the F-1 support fighter.

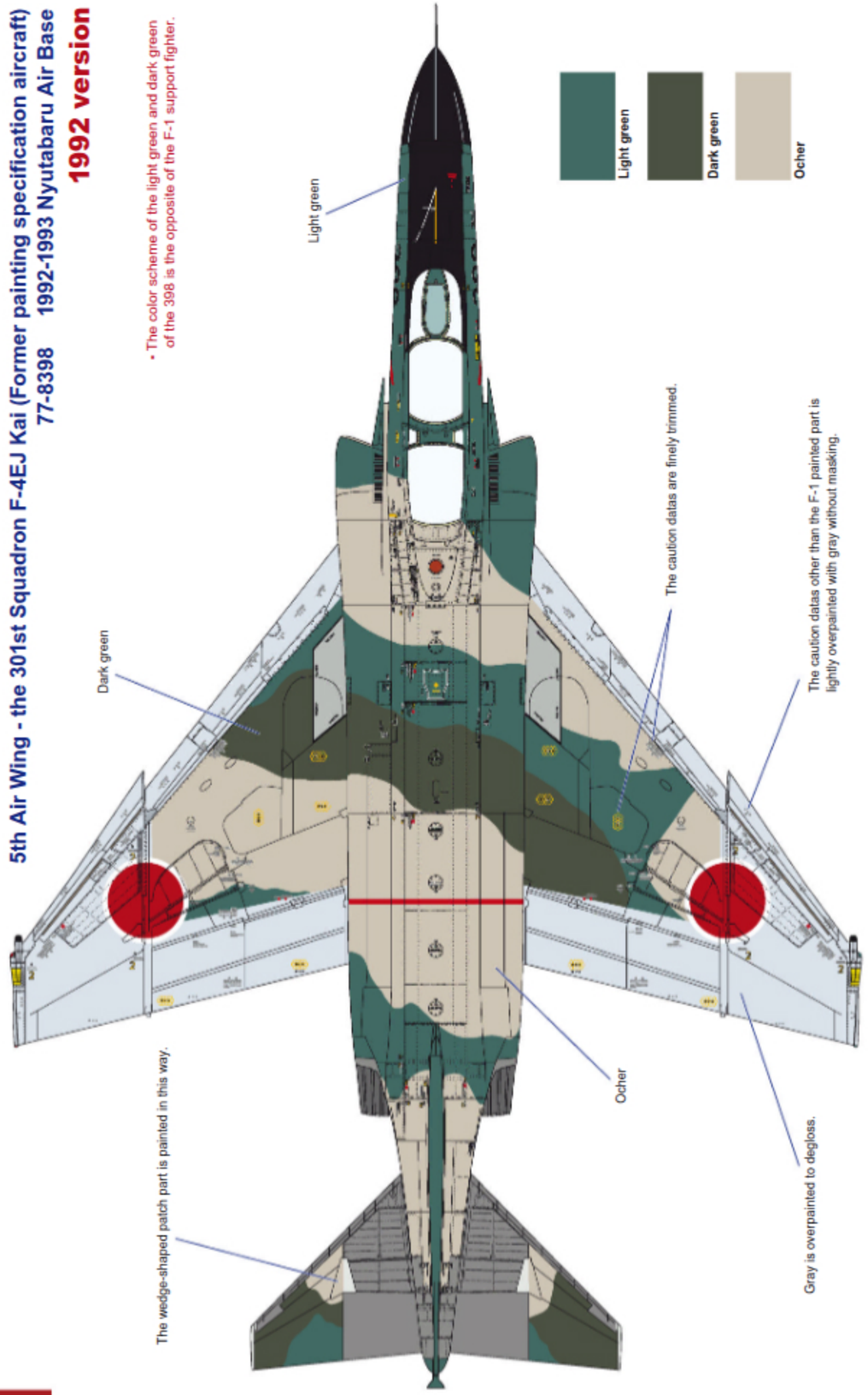

Light green
Dark green
Ocher
The caution datas are finely trimmed.
The caution datas other than the F-1 painted part is lightly overpainted with gray without masking.
Light green
Dark green
Ocher
The wedge-shaped patch part is painted in this way.
Gray is overpainted to degloss.

PHOTO PROFILE

Virtual Enemy Aircraft 1992 ver.

F-4EJ Kai 77-8398 October 9, 1992 Tsuiki Air Base. (Photo: Eiki Nakashima)

F-4EJ Kai 97-8427 October 9, 1992 Tsuiki Air Base. (Photo: Eiki Nakashima)

F-4EJ Kai 97-8427 July 29, 1992 Nyutabaru Air Base. (Photo: Eiki Nakashima)

Virtual Enemy Aircraft 1994 ver.

This is the 1994 version of the virtual enemy aircraft. In addition to the upper surface of the main wing, the airfoil of F-1 is reproduced on the vertical stabilizer. (Photo: Eiki Nakashima)

Overlook the upper surface of the left wing of the 1992 version of the virtual enemy aircraft 77-8398. It can be seen that it is painted to imitate the smaller airfoil of F-1 with a low wing loading. (Photo: Isami Akiyama)

Overlook the right wing. The original light gull gray part seems to be lightly overrated in light gray to reduce the gloss. (Photo: Isami Akiyama)

A panoramic view of the left side of the 398. The slightly visible underside of the outer wing indicates that the original insignia white is retained on the underside of the fuselage.

Overhead view of the 398 that is under maintenance and inspection behind the hangar. Compare to F-1, color scheme of dark pine needle color (dark green) and light pine needle color (light green) is opposite. The color combination with the anti-glare black paint on the nose matches unexpectedly. (Photo: Isami Akiyama)

1992 TAC AIR MEET PARTICIPATION AIRCRAFT

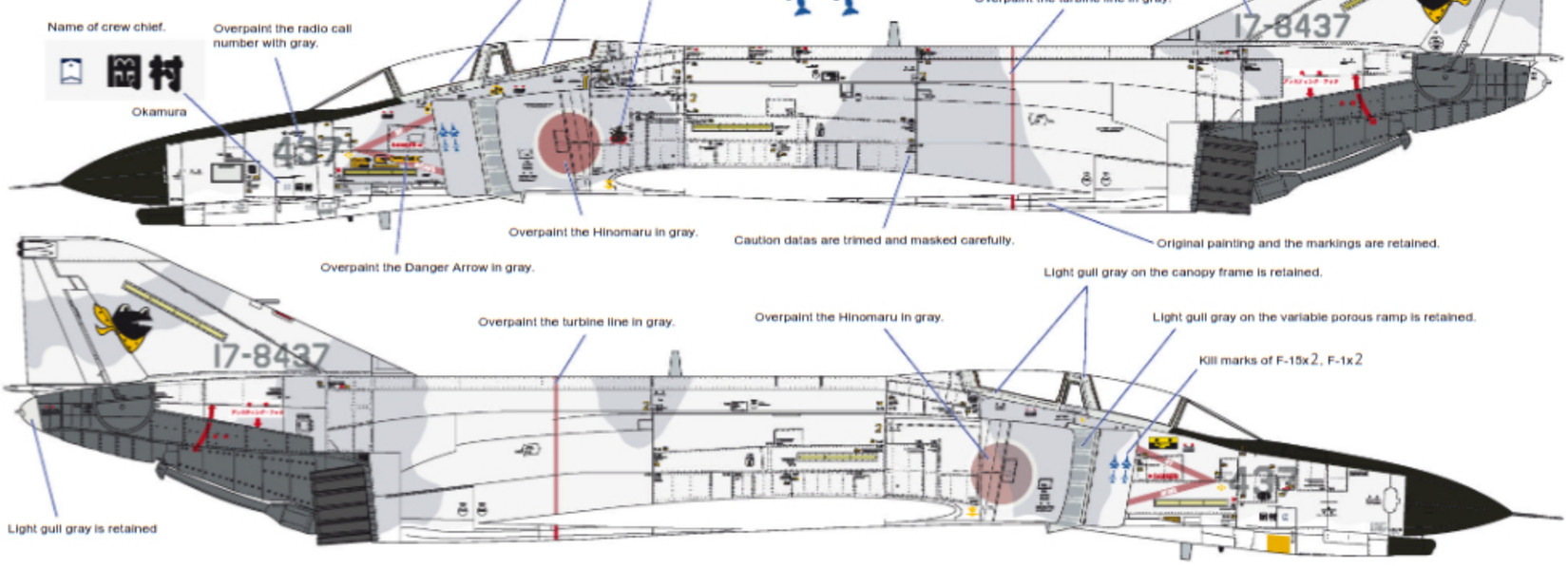
The 1992 TAC was a large-scale organized battle. The painting of the F-4 at that time was the same as the former painting specification of light gull gray and insignia white, and its luster was judged to be disadvantageous in terms of visibility in anti-fighter combat, so all participating aircrafts of the F-4EJ Kai Division (301st Squadron, 306st Squadron) and the F-4EJ division (302nd Squadron, 305th Squadron) were painted in low visibility. The 301st Squadron adopted the air superiority camouflage painting on the upper surface of the aircraft using two shades of light gray. Here, the water-based paints of R1-1003 (high light gray) and R1-1005 (low light gray) from the Japan Paint Manufacturers Association's standard color sample book for paints (1991 edition) were used. The first aircraft to be painted was the 437, but the pilot who was in charge of the painting plan was also a player, and due to busy training, he could not be involved in painting after 2nd aircraft. As a result, each aircraft got unique painting patterns. Also, since the lighter gray of the first unit was too bright, the gray with a lower brightness was used from the second unit. When looking up from below, the underside of the aircraft looks like a black shadow regardless of its color or luster, so no air superiority camouflage was applied and the original was left as it was, including the markings. The first painting aircraft was called the "first Moo-Moo" because its design reminded them of holstein. Small and detailed datas on each part of the aircraft, rescue-related markings, and the Keroyon mark on the tail were left unpainted with careful masking. For the Hinomaru, radio call number, serial number, intake Danger Arrow, turbine line, etc., light gray was oversprayed to reduce visibility, but it became difficult to distinguish the radio call number for the units 338 and 342. Therefore, it was written in the same font on the armo mark and the opposite side (right side of the nose). The F-15 and F-1 kill marks were stenciled in blue on the intake vane on the left, but this was not for pre-training, but "just for cheering up". Behind the Hinomaru on the left side of the fuselage is the original design of phantom boy with an ECM antenna. The crew's TAC name is stenciled on the frame on the left side of the canopy. The name of the crew chief on the ram air intakes on the left and right of the nose was not of TAC specification, but the standard marking of the squadron at this time. On the afternoon of July 20th, when the competition was held, a member who went to check the weather (the competition of the 301st Squadron was the 4th period in the afternoon) said, "Clouds will come out from the afternoon, so it is advantageous for us" , and the design that assumed a certain amount of cloud cover was successful that led them to be the excellent team in the F-4EJ Kai division (since it was a competition with only two squadrons, it was excellent, not a victory).

5th Air Wing - the 301st Squadron F-4EJ Kai 17-8437 (1st Moo-Moo / 1st TAC painted aircraft) July 1992 Komatsu Air Base

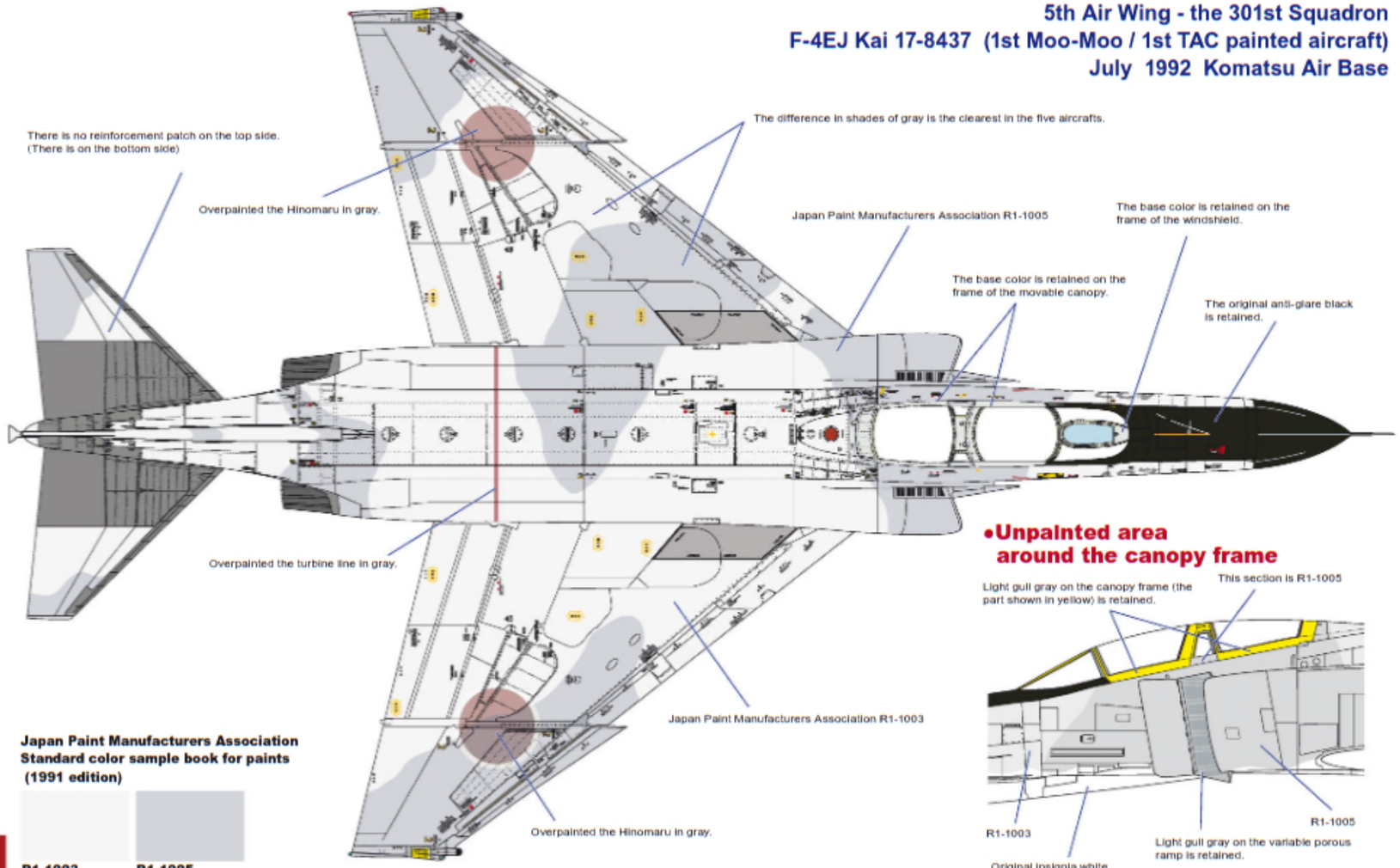
•TAC name of pilot

•Kill mark

•Phantom boy


TAC name of pilot.
Phantom Boy
Name of crew chief.
Okamura
Overpaint the radio call number with gray.
Overpaint the Danger Arrow in gray.
Overpaint the Hinomaru in gray.
Caution datas are trimed and masked carefully.
Overpaint the turbine line in gray.
Overpaint the serial number in gray.
The pattern line is drawn with reference to MiG photos etc.
Original painting and the markings are retained.
Light gull gray on the canopy frame is retained.
Overpaint the turbine line in gray.
Overpaint the Hinomaru in gray.
Light gull gray on the variable porous ramp is retained.
Kill marks of F-15x2, F-1x2
Light gull gray is retained
17-8437

5th Air Wing - the 301st Squadron
F-4EJ Kai 17-8437 (1st Moo-Moo / 1st TAC painted aircraft)
July 1992 Komatsu Air Base


There is no reinforcement patch on the top side.
(There is on the bottom side)
Overpainted the Hinomaru in gray.
The difference in shades of gray is the clearest in the five aircrafts.
Japan Paint Manufacturers Association R1-1005
The base color is retained on the frame of the windshield.
The base color is retained on the frame of the movable canopy.
The original anti-glare black is retained.
Overpainted the turbine line in gray.
Japan Paint Manufacturers Association R1-1003
Overpainted the Hinomaru in gray.

Japan Paint Manufacturers Association
Standard color sample book for paints
(1991 edition)

R1-1003 **R1-1005**

•Unpainted area around the canopy frame

Light gull gray on the canopy frame (the part shown in yellow) is retained.
This section is R1-1005
R1-1003
Original insignia white
Light gull gray on the variable porous ramp is retained.
R1-1005

5th Air Wing - the 301st Squadron F-4EJ Kai 57-8354 (Captain's aircraft) July 1992 Komatsu Air Base

•TAC name of pilot

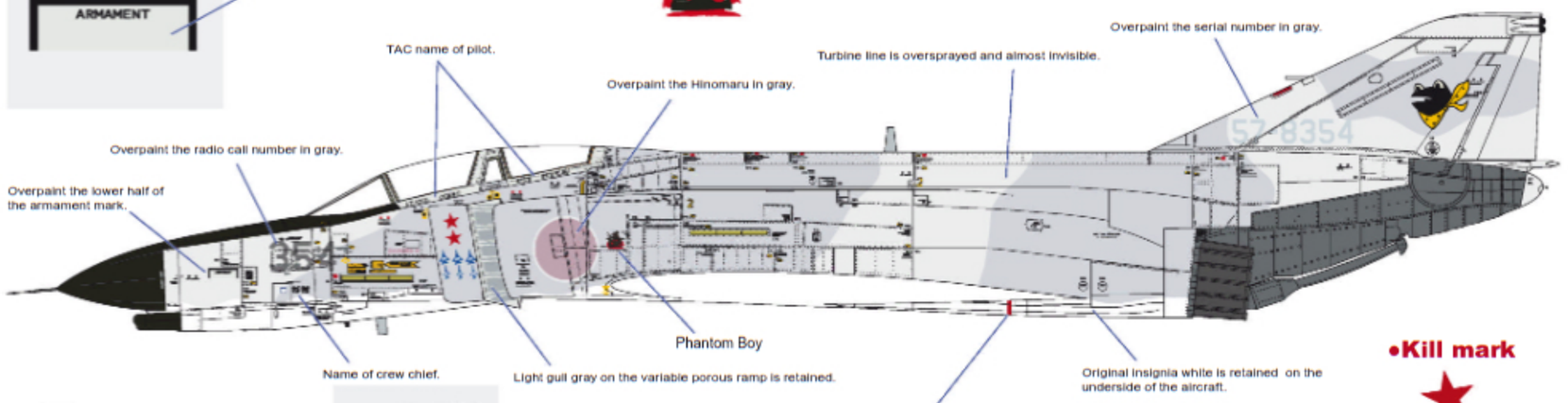
LT/COL COSMO

2/LT BUBBLES

•Phantom Boy

•Armament mark

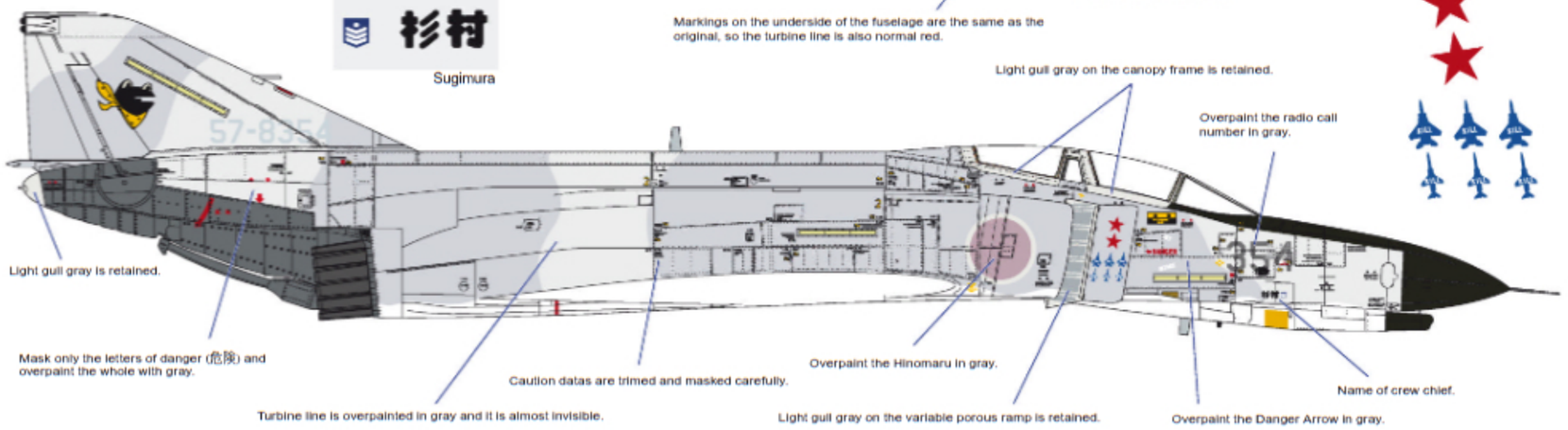
The writing part is light gull gray of the base color.


TAC name of pilot.
Overpaint the Hinomaru in gray.
Turbine line is oversprayed and almost invisible.
Overpaint the serial number in gray.
Overpaint the radio call number in gray.
Overpaint the lower half of the armament mark.
Phantom Boy
Name of crew chief.
Light gull gray on the variable porous ramp is retained.
Markings on the underside of the fuselage are the same as the original, so the turbine line is also normal red.
Original insignia white is retained on the underside of the aircraft.

杉村

Sugimura

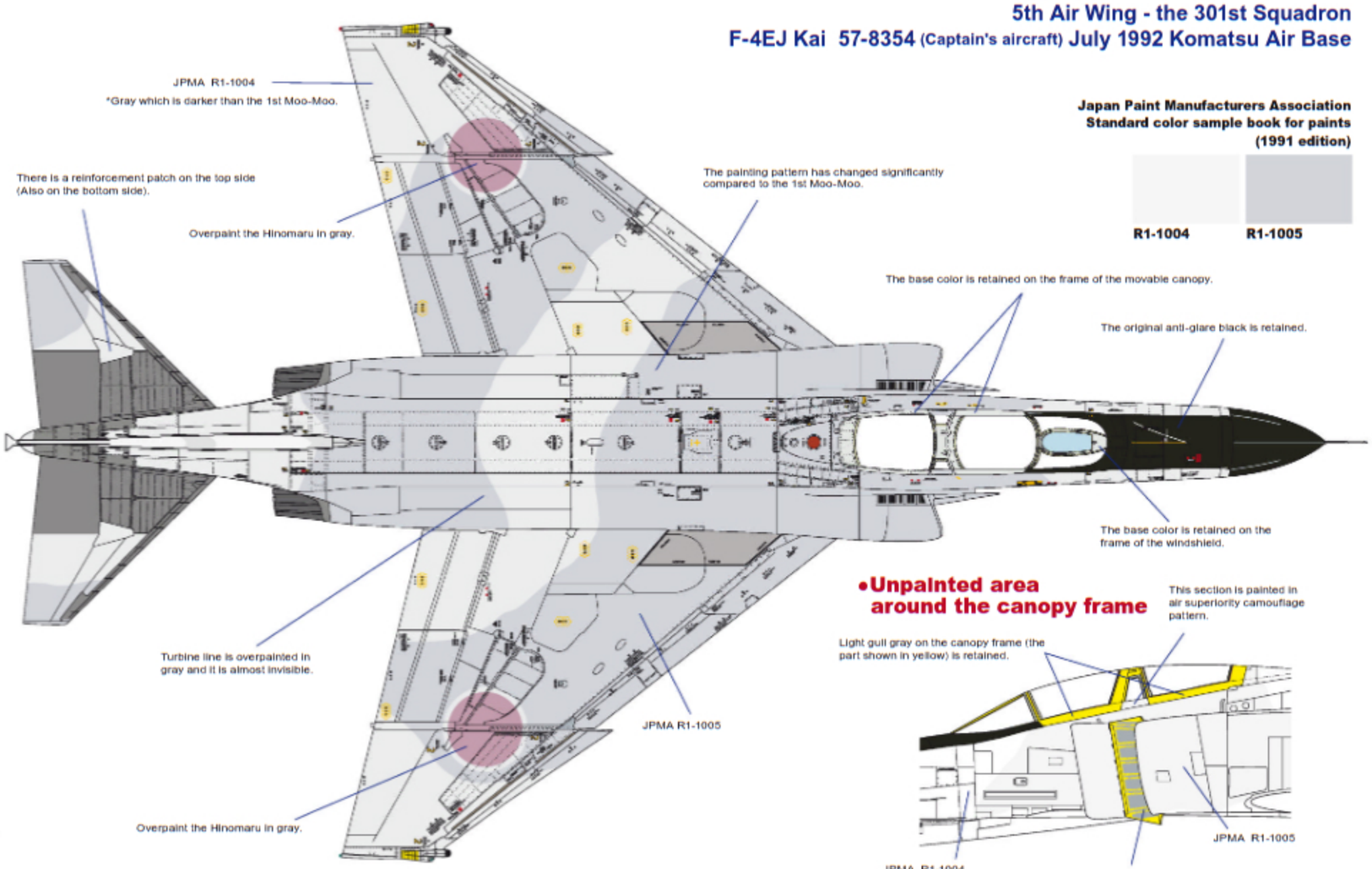
•Kill mark


Light gull gray on the canopy frame is retained.
Overpaint the radio call number in gray.
Light gull gray is retained.
Mask only the letters of danger (危険) and overpaint the whole with gray.
Caution datas are trimed and masked carefully.
Overpaint the Hinomaru in gray.
Name of crew chief.
Turbine line is overpainted in gray and it is almost invisible.
Light gull gray on the variable porous ramp is retained.
Overpaint the Danger Arrow in gray.

5th Air Wing - the 301st Squadron F-4EJ Kai 57-8354 (Captain's aircraft) July 1992 Komatsu Air Base

Japan Paint Manufacturers Association Standard color sample book for paints (1991 edition)

R1-1004 R1-1005


JPMA R1-1004
*Gray which is darker than the 1st Moo-Moo.
There is a reinforcement patch on the top side (Also on the bottom side).
Overpaint the Hinomaru in gray.
The painting pattern has changed significantly compared to the 1st Moo-Moo.
The base color is retained on the frame of the movable canopy.
The original anti-glare black is retained.
The base color is retained on the frame of the windshield.
Turbine line is overpainted in gray and it is almost invisible.
JPMA R1-1005
Overpaint the Hinomaru in gray.

•Unpainted area around the canopy frame

This section is painted in air superiority camouflage pattern.
Light gull gray on the canopy frame (the part shown in yellow) is retained.
JPMA R1-1005
JPMA R1-1004
Light gull gray on the variable porous ramp is retained.

5th Air Wing - the 301st Squadron F-4EJ Kai 47-8338 July 1992 Komatsu Air Base

•Name of crew chief & armament mark

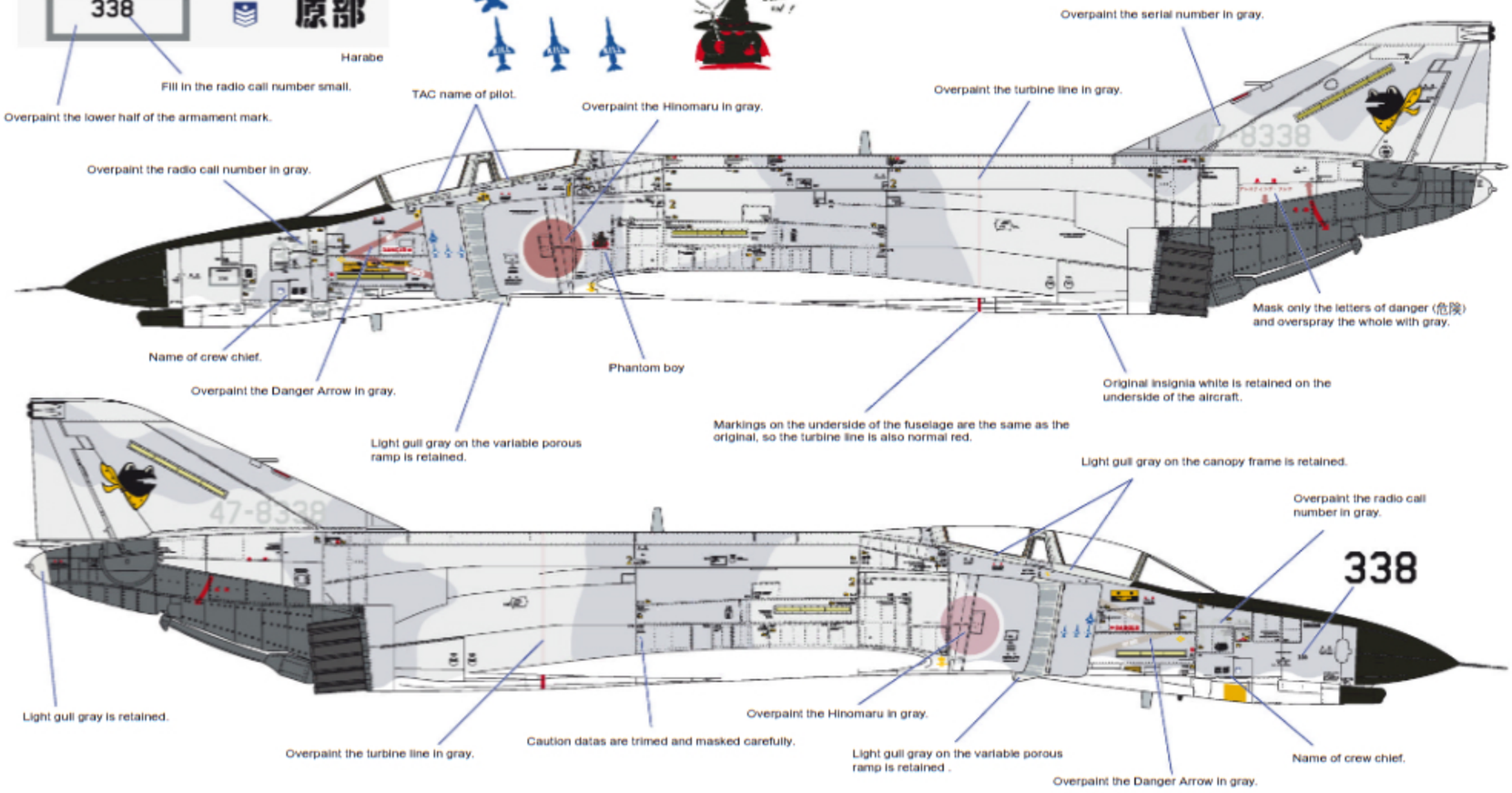
Overpaint the lower half of the armament mark.

Fill in the radio call number small.

•Kill mark

•Phantom Boy

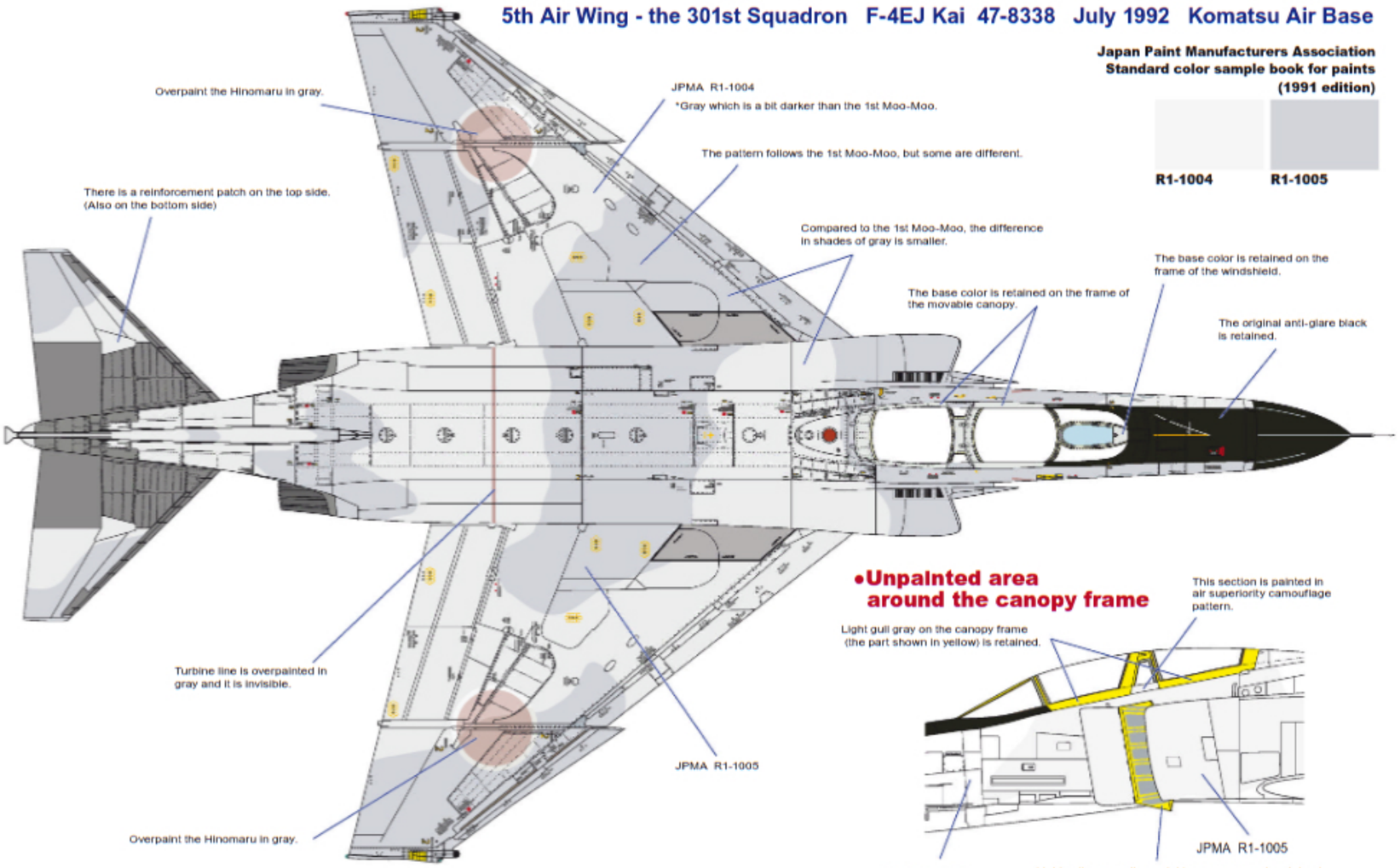
•TAC name of pilot


TAC name of pilot.
Overpaint the Hinomaru in gray.
Overpaint the serial number in gray.
Overpaint the turbine line in gray.
Overpaint the radio call number in gray.
Name of crew chief.
Overpaint the Danger Arrow in gray.
Phantom boy
Mask only the letters of danger (危険) and overspray the whole with gray.
Original insignia white is retained on the underside of the aircraft.
Light gull gray on the variable porous ramp is retained.
Markings on the underside of the fuselage are the same as the original, so the turbine line is also normal red.
Light gull gray on the canopy frame is retained.
Overpaint the radio call number in gray.
338
Light gull gray is retained.
Overpaint the turbine line in gray.
Caution datas are trimed and masked carefully.
Overpaint the Hinomaru in gray.
Light gull gray on the variable porous ramp is retained .
Name of crew chief.
Overpaint the Danger Arrow in gray.

5th Air Wing - the 301st Squadron F-4EJ Kai 47-8338 July 1992 Komatsu Air Base

Japan Paint Manufacturers Association
Standard color sample book for paints
(1991 edition)

R1-1004 **R1-1005**


Overpaint the Hinomaru in gray.
JPMA R1-1004
*Gray which is a bit darker than the 1st Moo-Moo.
The pattern follows the 1st Moo-Moo, but some are different.
There is a reinforcement patch on the top side.
(Also on the bottom side)
Compared to the 1st Moo-Moo, the difference in shades of gray is smaller.
The base color is retained on the frame of the windshield.
The base color is retained on the frame of the movable canopy.
The original anti-glare black is retained.
Turbine line is overpainted in gray and it is invisible.
JPMA R1-1005
Overpaint the Hinomaru in gray.

•Unpainted area around the canopy frame

This section is painted in air superiority camouflage pattern.
Light gull gray on the canopy frame (the part shown in yellow) is retained.
JPMA R1-1005
JPMA R1-1004
Light gull gray on the variable porous ramp is retained.

LOW-VISIBILITY PAINTING AT THE TAC AIR MEET 1992

Participating aircrafts of the 301st Squadron forming a line in the ramp area at the Komatsu Air Base just before the ACM on July 20, 1992 (Photo: Isami Akiyama)

The JSADF TAC MEET held at Komatsu Air Base in July 1992 was neither an ACM nor a competition of point shooting, but a large-scale organized battle in collaboration with the ground crew. At that time, the squadron equipped with the Phantom was being reduced due to the model change to the F-15, and only four squadrons were remained, which was six at the peak. The 301st Squadron and the 306th Squadron, which were transitioned to F-4EJ, participated for the first time, and the 302nd Squadron, which was about to be transitioned to F-4EJ, and the 305th Squadron, which was about to be transitioned to F-15 were the last participation as an F-4EJ unit. Due to this, the four squadrons were divided into the F-4EJ Kai division and the F-4EJ division to carry out the competition.

Regarding the exterior painting of the aircraft, the Air superiority camouflage paint had not yet appeared, and since the old paint of glossy light gull gray and insignia white had been remained on both EJ and EJ Kai, the four squadrons were participating in the competition wearing low-visibility paint researched by themselves.

The 302nd Squadron adopted a purple that foresees weathers conditions such as haze, the 305th Squadron adopted a countershaded-like paint pattern, the 306th Squadron adopted a low-visibility paint overpainted whole aircraft in light gray, and the 301st Squadron adopted a cloud-shaped pattern using two light gray colors. The 305th Squadron won the excellent team in the F-4EJ category, and the 301st Squadron won the excellent team in the F-4EJ Kai category. (Since each competition consists of only two squadrons, it was considered excellent rather than winning.)

Here, I would like to introduce Mr. Yasushi Kawabuchi (Major General, retired in 2018) who proposed the design of the 301st Squadron for the TAC AIR MEET 1992 at the time, and also participated as a rear seat member of the 1st aircraft of the 2nd formation. I had chance to interview and could hear an interesting story about the painting of the aircrafts.

Q: Please tell us your opinion as the person who devised the design of the 1992 competition.

Kawabuchi: First of all, the 1992 competition was held about 30 years ago. Records of that time have not been preserved as administrative documents. I myself don't have the drawings of that time either, so I would like to answer as far as I remember.

Speaking of F-4 camouflage painting, many people think of three-color camouflage painting based on the dark green of US Air Force aircraft. The painting of the F-4 for the TAC AIR MEET in 1992 was supposed to be a camouflage and is hard to find, but it was based on gray, which was the standard paint color for F-4 at that time.

I drew camouflage patterns many times on copies of F-4 drawing and other papers. After drawing a lot, I found that it was better to use a two-color mottled pattern like a cow for JASDF instead of the US Air Force band pattern, and I proposed it as a basic concept of the TAC AIR MEET 1992.

As to the painting work, we had the maintenance staff and pilots of the squadron to participate in the work in their spare moments from the training. This was a new burden of work for them, but it was also an opportunity for the squadrons to work together to build an aircraft for the TAC Meet, and I think it was a good opportunity to strengthen the unity of the squadron even if it became busier.

Q: Looking back on the painting work, please tell us if there were any difficulties or efforts.

Kawabuchi: The TAC Meet in 1992 was a competition in which the air and the ground crew cooperated to compete for superiority and inferiority in systematic total combat power, rather than competing for maneuvering skills in close combat like ACM. Furthermore, it was the first competition to be equipped with an electronic warfare device called ALQ-131, and delaying visual detection was an important factor in determining victory or defeat. For that reason, I personally had a hard time thinking about painting patterns that were difficult to see.

It's not clear because there are no documents left, but I think that three gray colors were prepared in my memory. I painted it on the 437 first, and on the other aircraft, I think I changed the gray tone to a slightly darker paint. I thought the camouflage color of the 437, which was painted first, was a little bright overall, but it would not shine in the sky because it was a matte paint, so I used the same paint color for the TAC Meet. By all means, I would like you to compare and confirm the photos of that time. In addition, painting instructions other than the first 437 were left to the discretion of the on-site leader on the day. I think that made a difference in the unique patterns of each aircrafts and the amount of overpaint of the Hinomaru (the rising sun).

Q: How was the visibility effect of this paint actually?

Kawabuchi: On the day of the TAC Air Meet, it was hazy up to 10,000 meters, and I remember that it was difficult to see in the hazy sky from early spring to before the rainy season. When you looked at the F-4 from below, the shaded areas such as the underside of the fuselage became black dots, indicating its existence in the air, but when you looked at it from above, the sun's sunlight and aerial visibility make it difficult to see a wingman a little further away. Nowadays, it would be easy to quantify the invisibleness by video analysis using a commercially available application, but as a person who was there at that time, the colors and painting patterns I proposed considering the invisibleness, at this point, I think that the results were as intended.

In July 1992, the TAC Meet was completed, and the captain's aircraft (57-8354) was towed to the hanger. Since the event is an organized battle, you can see the air superiority camouflage painting, which aims to reduce visibility by painting light gray in two colors, light and dark. Behind this aircraft, there are F-4EJ Kais of the 306th Squadron, which are painted in the air superiority camouflage painting of a light gray. (Photo by Eiki Nakashima)

1,2. The captain's aircraft that started the engine for the TAC Meet. The intake vane is stenciled with star marks representing the captain's LtCol and kill marks (**2**) for rising morale. Behind the Hinomaru, there are an illustration (**4**) of a Phantom Boy, emitting radio waves from the newly introduced ALQ-131. **3.** "First Moo Moo" 437, preparing for taking off. This is the first aircraft of the air superiority camouflage painting, and the painting pattern is the closest to the original design of the inventor. **5.** The 301st Squadron aircraft, taxing out under the guidance of the grand crew. The aircraft waiting in the airspace are the reconnaissance aircraft RF-4Es, and a union of the F-15DJs Aggressor and Mitsubishi F-1s. As you can see from the intake vane kill mark, as long as it is a competition, they aim to shoot down all F-15 and F-1 aircrafts that can get high scores. (Photo: Isami Akiyama)

1. 1st formation 1st aircraft F-4EJ Kai 54-8354
2. 1st formation 2nd aircraft F-4EJ Kai 47-8342
3. 2nd formation 1st aircraft F-4EJ Kai 17-8437
(Oct. 9, 1992 Photo: Eiki Nakashima)

4. 2nd formation 2nd aircraft F-4EJ Kai 47-8338
(Jul. 19, 1992 Photo: Eiki Nakashima)

5. Spare aircraft F-4EJ Kai 07-8434
(Oct. 9, 1992 Photo: Eiki Nakashima)

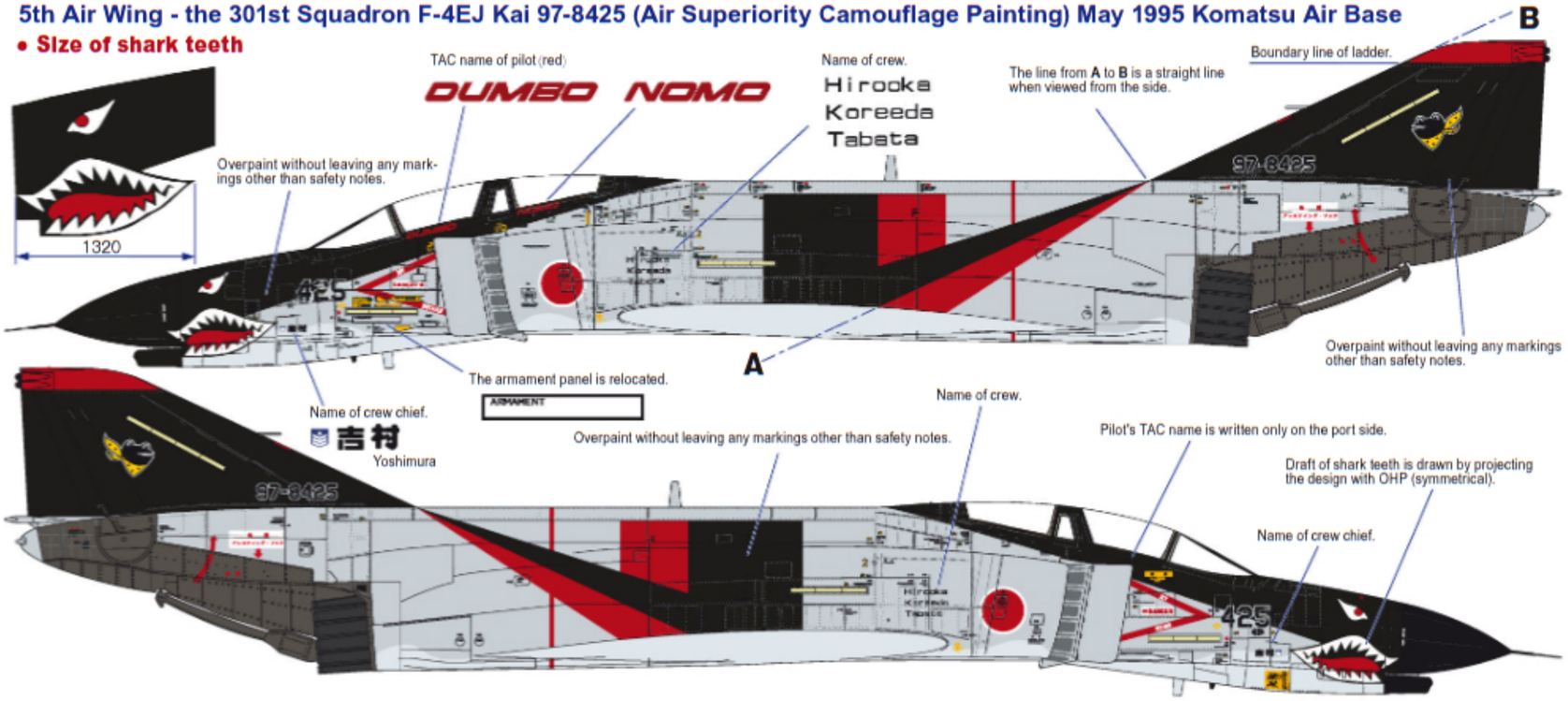
F-4EJ Kai 17-8437 "First Moo-Moo" taken from a high angle at Nyutabaru Air Base. This aircraft was first test-painted in the air superiority camouflage for The TAC Meet. Using this aircraft, the painting work procedure and design were discussed. From the result, it was judged that the brighter of the two colors of light gray was too white, but since the gloss of original paint was lost by the matte paint, it was judged again there was no problem with the low visibility effect. So it could participate in without any change.

1995 TAC AIR MEET PARTICIPATING AIRCRAFT

The content of this year's TAC MEET was the simulated launch of missiles on chase aircraft and the shooting of targets towed by target tugs. The special paintings applied to the participating aircrafts by each unit were not aimed at low visibility or deceptive effect in air-to-air, and all units had colorful markings to boost morale. In the 301st Squadron, Blacktail, Shark Teeth, 5 of the 5th Air Corps and V marking for Victory were combined. This painting was applied to all six aircraft, including the captain's aircraft 97-8417, 57-8375, 67-8384, 67-8386, 97-8422, and 97-8425. These designs and painting were outstanding among all the teams participating in the TAC. The phantom at that time was a time when both the "air superiority camouflage painting", which was introduced in 1992, and the "original white aircraft (conventional paint with light gull gray and insignia white)" existed at the same time. Since the aircrafts participating in the TAC Meet, including the spare aircrafts, were selected based on flight characteristics and shooting accuracy, both were mixed in the assigned aircraft. Therefore, for the conventional "white" aircraft, the 384 and the 386, in order to have visual uniformity, the upper side of the aircraft was overcoated with a light blue color to improve low visibility. The red parts such as the large and conspicuous Hinomaru, the intake Danger Arrow, and the turbine line are also lightly overcoated with light blue to fill the visual gap with the air superiority camouflage painting aircraft. As for the 375, which was the first to be painted, the work had not progressed to the light blue topcoat because it was excluded from the candidates at an early stage. The theme of this marking was "How to make a line on the body with many curves to look straight when viewed from the side?" And "Completeness of commemorative paint grade shark teeth". The theme of this marking was "How to make a line on the fuselage with many curves so that it is in a straight line when viewed from the side?" and "Shark teeth that matches the anniversary painting". Regarding Shark Teeth, he said, "I studied a lot of nose art such as the US Navy's F-14 and focused on drawing more ferocious, challenging and beautiful expressions (especially the shape of the eyes and how to open the mouth)." As for the shark teeth and eyes, the facial expressions of all the aircrafts are unified by using drafts created by projecting the design with OHP for masking. It is painted black diagonally from the nose to the rear of the canopy, giving a very sharp impression, but this hides the armorment panel on the left side of the nose, so It is temporarily added under the formation light on the side of the nose. The large V-shape is designed in black and red on the side of the fuselage, and the position of the tip is the place where the third frame of the fuselage formation light is divided equally. The black and red of boundary line and the front edge of the vertical stabilizer are in a straight line. The area above the ladder boundary of the vertical stabilizer is red. The upper surface of the outer wing of the main wing is black, and the outside from the border of the leading edge flap is red. The radio call number, serial number, and Keroyon mark are bordered with 12mm wide tape. The ram air intake on the left side of the nose was designed with the surname and rank insignia of the chief of the aircraft, and the name of the crew in charge was written behind the Hinomaru on the fuselage. Regarding the captain's aircraft, there is a 48 mm wide gold line centered on the V-shaped black and red boundary of the fuselage, and on the vertical stabilizer and on the main wing tips, there are also 48 mm gold lines from the black and red boundary to the red side. The last name and eyes of the ram air intake are also gold. In the painting work, the marking part was coated with clear paint in advance, and it was painted in the order of white => red => black.

5th Air Wing - the 301st Squadron F-4EJ Kai 97-8425 (Air Superiority Camouflage Painting) May 1995 Komatsu Air Base

- **Size of shark teeth**


1320
TAC name of pilot (red)
DUMBO NOMO
Name of crew.
Hirooka
Koreeda
Tabata
Boundary line of ladder.
B
The line from A to B is a straight line when viewed from the side.
Overpaint without leaving any mark-ings other than safety notes.
97-8425
425
A
Overpaint without leaving any markings other than safety notes.
The armament panel is relocated.
ARMAMENT
Name of crew chief.
吉村
Yoshimura
Name of crew.
Overpaint without leaving any markings other than safety notes.
Pilot's TAC name is written only on the port side.
Draft of shark teeth is drawn by projecting the design with OHP (symmetrical).
Name of crew chief.

5th Air Wing - the 301st Squadron F-4EJ Kai

97-8422 / 97-8425 (Air Superiority Camouflage Painting) May 1995 Komatsu Air Base

- **Unit mark**

Masking with 12 mm wide tape.

- **Radio call number**

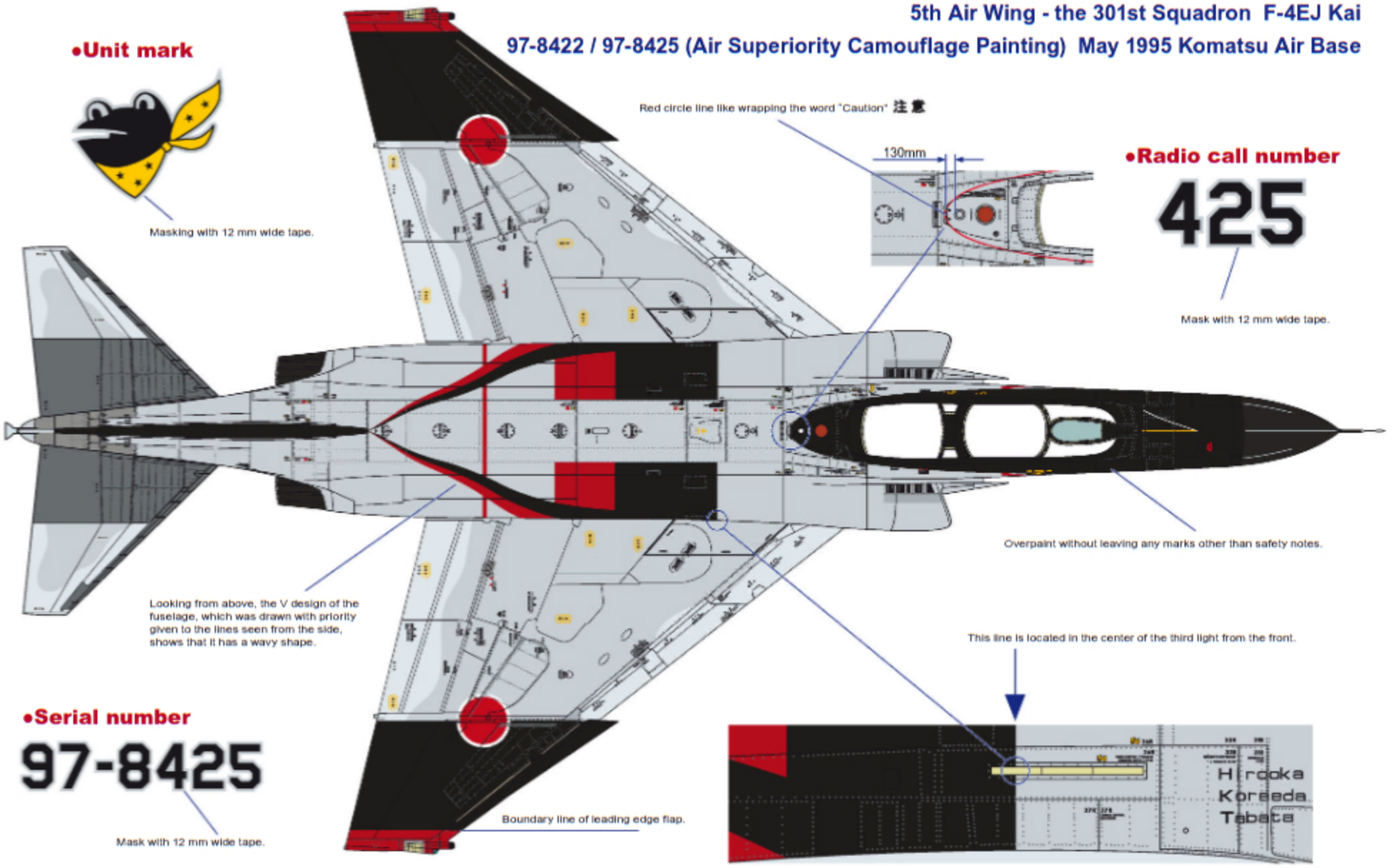
425

Mask with 12 mm wide tape.

- **Serial number**

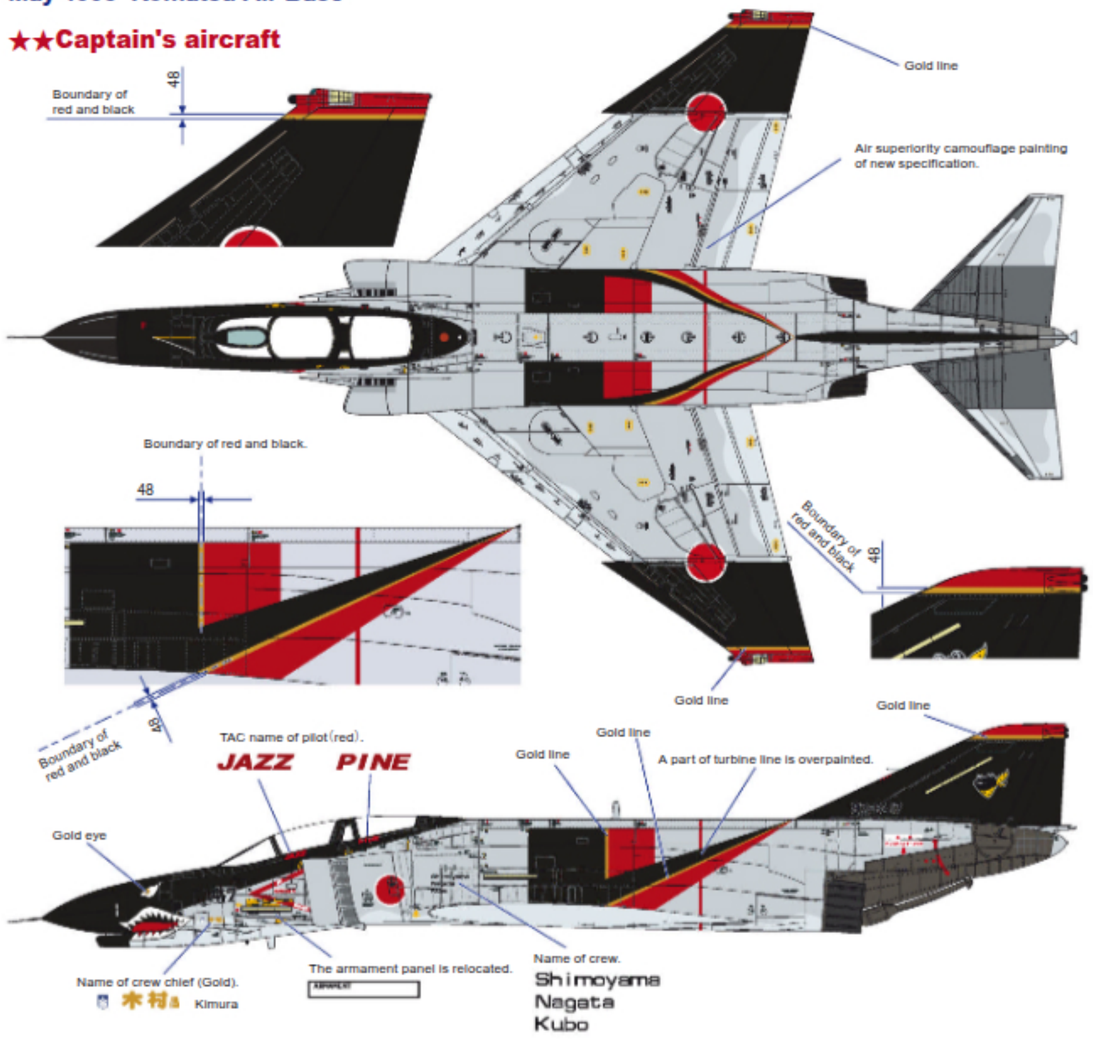
97-8425

Mask with 12 mm wide tape.

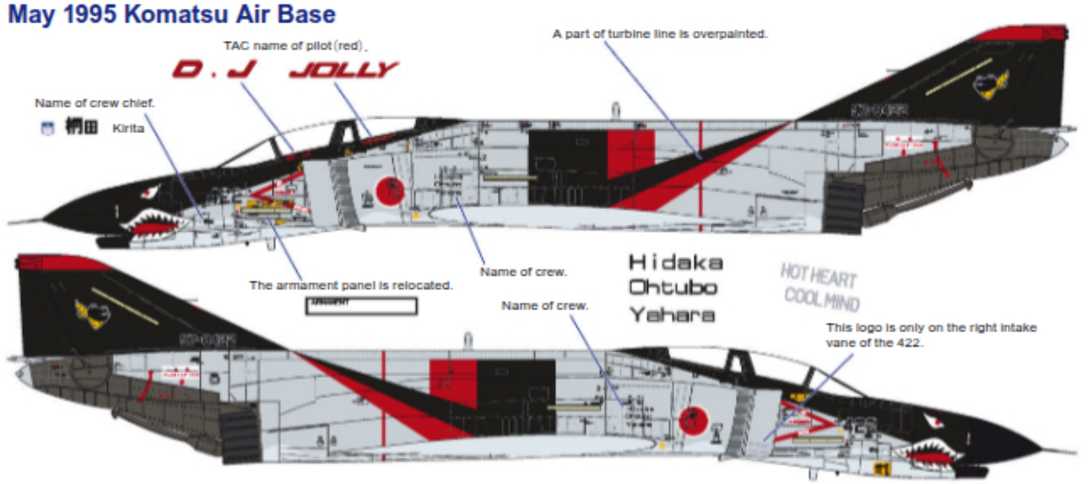

Red circle line like wrapping the word "Caution" 注意
130mm
Looking from above, the V design of the fuselage, which was drawn with priority given to the lines seen from the side, shows that it has a wavy shape.
Overpaint without leaving any marks other than safety notes.
This line is located in the center of the third light from the front.
Boundary line of leading edge flap.
Hirooka
Koreeda
Tabata

5th Air Wing - the 301st Squadron F-4EJ Kai 97-8417 (Air Superiority Camouflage Painting)
May 1995 Komatsu Air Base

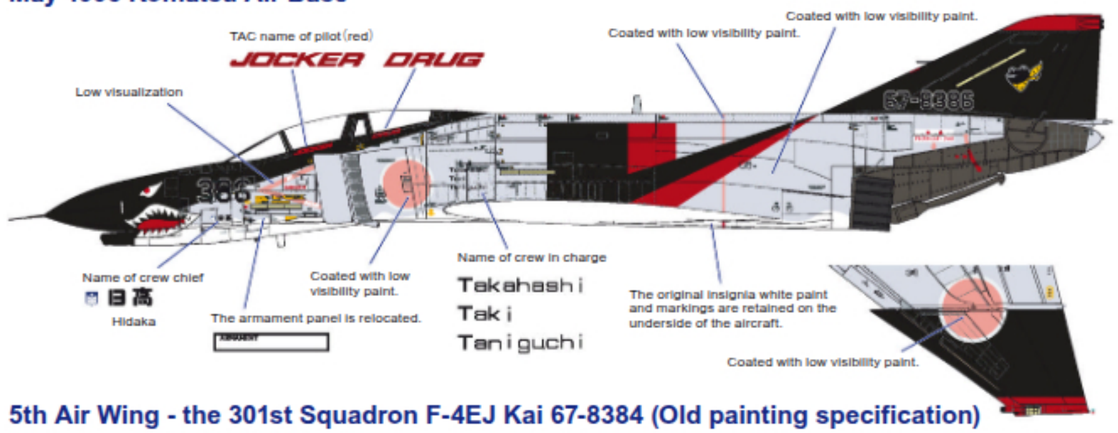
★★Captain's aircraft



5th Air Wing - the 301st Squadron F-4EJ Kai 97-8422 (Air Superiority Camouflage Painting)
May 1995 Komatsu Air Base

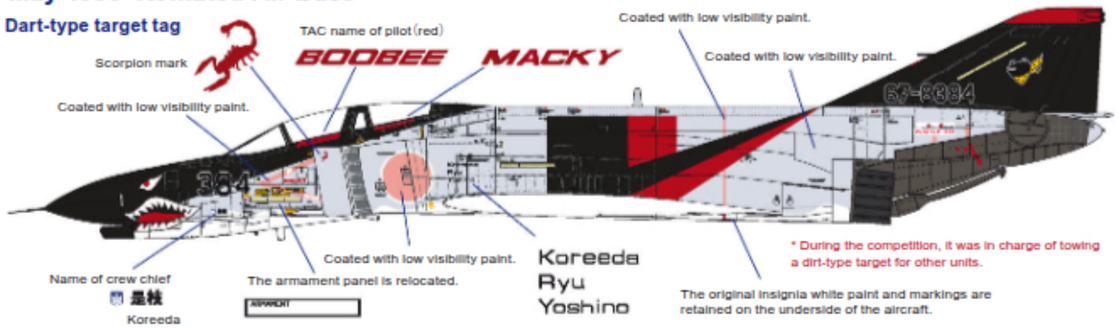


5th Air Wing - the 301st Squadron F-4EJ Kai 67-8386 (Old painting specification)
May 1995 Komatsu Air Base


TAC name of pilot(red)
JOCKER DRUG
Coated with low visibility paint.
Coated with low visibility paint.
Low visualization
Name of crew chief
日高 Hidaka
Coated with low visibility paint.
The armament panel is relocated.
Name of crew in charge
Takahashi
Taki
Taniguchi
The original insignia white paint and markings are retained on the underside of the aircraft.
Coated with low visibility paint.

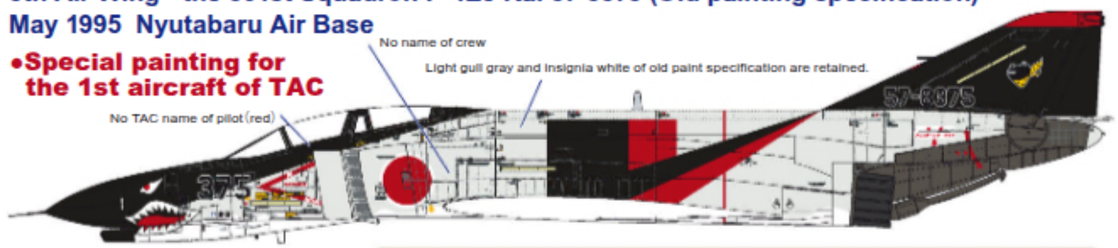
5th Air Wing - the 301st Squadron F-4EJ Kai 67-8384 (Old painting specification)
May 1995 Komatsu Air Base

Dart-type target tag


TAC name of pilot(red)
Scorpion mark
BOOBEE MACKY
Coated with low visibility paint.
Coated with low visibility paint.
Coated with low visibility paint.
Name of crew chief
島枝 Koreeda
The armament panel is relocated.
Coated with low visibility paint.
Koreeda
Ryu
Yoshino
* During the competition, it was in charge of towing a dirt-type target for other units.
The original insignia white paint and markings are retained on the underside of the aircraft.

5th Air Wing - the 301st Squadron F-4EJ Kai 57-8375 (Old painting specification)
May 1995 Nyutabaru Air Base

•Special painting for the 1st aircraft of TAC



The first aircraft of the TAC painting in 1995 was the 375 with this old painting specification. However, because it was excluded from the candidates at an early stage, it did not reach the ghost gray painting with light blue, and the upper side of the aircraft retained light gull gray. The TAC name and the name of the crew in charge are also blank.

When painting several aircrafts in the same way, such as the TAC Air Meet participating aircraft, paint only one aircraft first, then check how it looks. Not painting all aircrafts at once. At the time of the TAC AIR Meet, the 57-8375 aircraft with the old painting specification was test-painted on it, but because it was excluded from the candidates for participating aircraft on the way, the light blue paint that was supposed to be overpainted on the original light gull gray was not painted. The photo is the 375. It can be seen that the painting including the markings such as the Hinomaru and others is retained as it was. (Photo courtesy : Hiroyuki Yano)

TACTICAL AIR MEET 1995

F-4EJ KAI 97-8417 97-8425 97-8422 67-8386 67-8364

The captain's aircraft 97-8417 photographed in the line at Komatsu Air Base on May 27, 1995. Gold lines are painted in the V on the fuselage and on the main wing, also the boundary between the red and black on the vertical stabilizer. (Photo: Eiki Nakashima)

The captain's aircraft taxiing out for the TAC Meet on June 1, 1995. The highly completed markings of shark teeth have been painted in the same finish on all aircrafts by using a draft drawn on the OHP. The black eyes of the captain's aircraft were also painted in gold. (Photo : Eiki Nakashima)

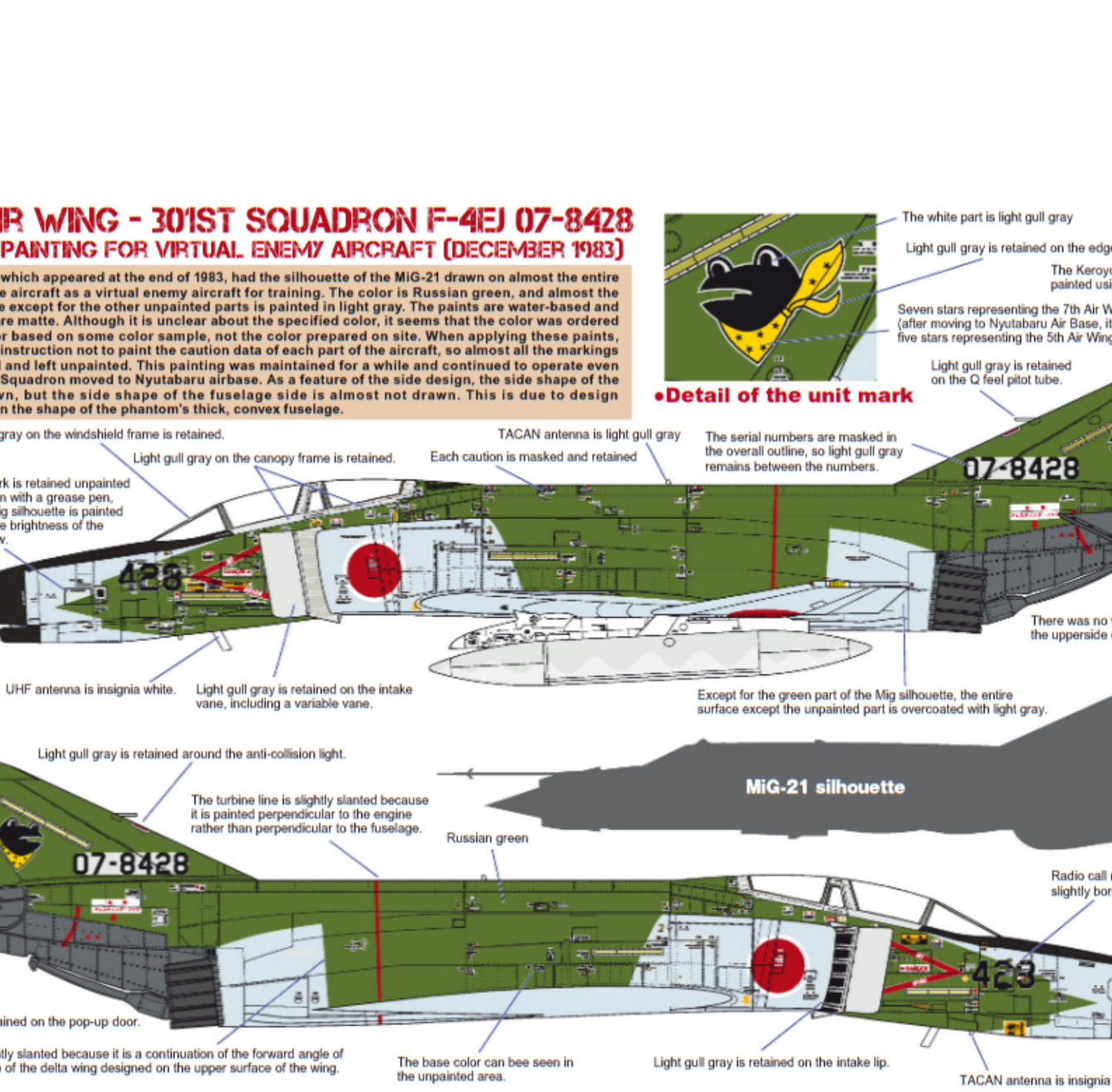
The 417 (captain's aircraft) taken on May 31, 1995. The black painting on the nose and the V-mark line on the fuselage seem to be bent at first glance, but these are designed to be a straight line when viewed from the side. (Photo courtesy : Hiroyuki Yano)

The exterior painting specification of F-4EJ / EJ Kai were changed to the air superiority camouflage painting in 1992, but it took some time to complete the repainting of all aircrafts because the repainting work was done during the IRAN (Inspection and Repair As Necessary). At the time of 1995, old and new paint specifications were still mixed. And the aircrafts which participated in TAC Meet were also mixed. The photo shows 97-8425 aircraft taxiing out as the 2nd aircraft of the 1st formation on June 1, 1995. (Photo : Eiki Nakashima)

The 97-8422 photographed in the line at Komatsu Air Base on May 27, 1995. This aircraft is also a new air superiority camouflage painting. (Photo: Eiki Nakashima)

On June 1, 1995, The 67-8386 in the old painting specification is taxiing out for a competition. The reason why the light gull gray part and the red part such as the Hinomaru are made low visibility is to suppress glossy and flashy painting and match the appearance with the air superiority camouflage painting.

The 67-8364 that participated as a spare machine. It is also painted in the old specification. It also undertook a task of towing a dart target during the competition of other units. The intake vane on the left has a scorpion mark. Is it a joke that compare the target towing mission to Iwo Jima's QF-104J?



The 422 and the 386 fly in formation on May 31, 1995. It is a mixture of the air superiority camouflage painting and the old painting specifications, but by making the latter low visibility, it can be seen that the appearance is similar without changing the size of the Hinomaru.
(Photo courtesy : Hiroyuki Yano)

7TH AIR WING - 301ST SQUADRON F-4EJ 07-8428

SPECIAL PAINTING FOR VIRTUAL ENEMY AIRCRAFT (DECEMBER 1983)

This aircraft, which appeared at the end of 1983, had the silhouette of the MiG-21 drawn on almost the entire surface of the aircraft as a virtual enemy aircraft for training. The color is Russian green, and almost the entire surface except for the other unpainted parts is painted in light gray. The paints are water-based and both colors are matte. Although it is unclear about the specified color, it seems that the color was ordered from a vendor based on some color sample, not the color prepared on site. When applying these paints, there was an instruction not to paint the caution data of each part of the aircraft, so almost all the markings were masked and left unpainted. This painting was maintained for a while and continued to operate even after the 301 Squadron moved to Nyutabaru airbase. As a feature of the side design, the side shape of the nose is drawn, but the side shape of the fuselage side is almost not drawn. This is due to design constraints on the shape of the phantom's thick, convex fuselage.

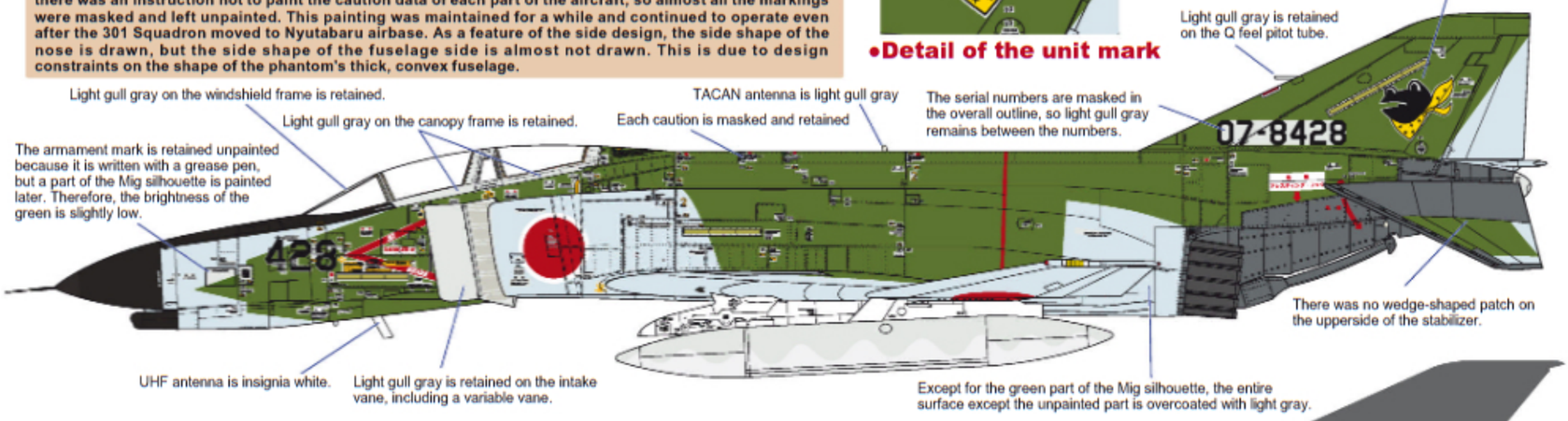
The white part is light gull gray

Light gull gray is retained on the edge of the mark

The Keroyon mark at that time was painted using a paper pattern.

Seven stars representing the 7th Air Wing (after moving to Nyutabaru Air Base, it become five stars representing the 5th Air Wing)

•Detail of the unit mark



Light gull gray is retained on the Q feel pitot tube.

Light gull gray on the windshield frame is retained.

Light gull gray on the canopy frame is retained.

TACAN antenna is light gull gray

Each caution is masked and retained

The serial numbers are masked in the overall outline, so light gull gray remains between the numbers.

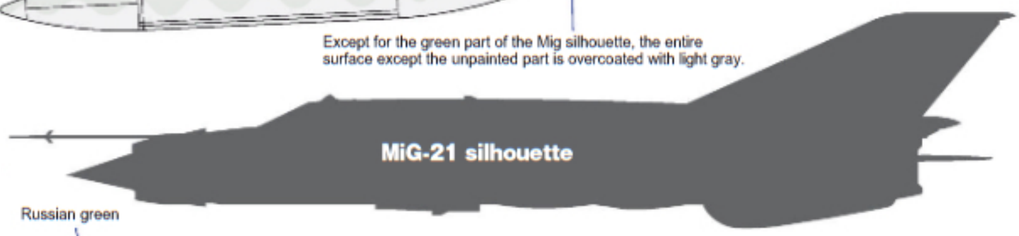
The armament mark is retained unpainted because it is written with a grease pen, but a part of the Mig silhouette is painted later. Therefore, the brightness of the green is slightly low.

There was no wedge-shaped patch on the upperside of the stabilizer.

UHF antenna is insignia white.

Light gull gray is retained on the intake vane, including a variable vane.

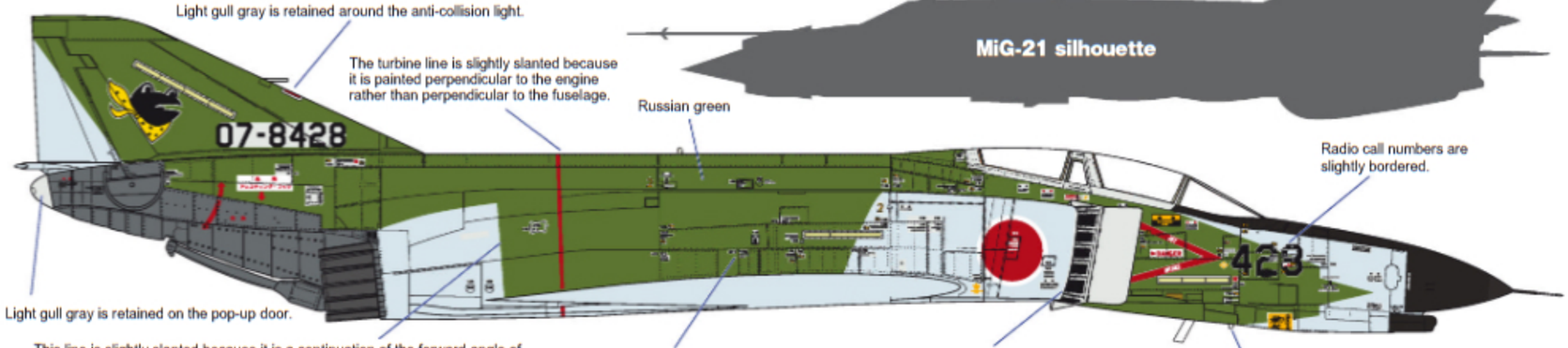
Except for the green part of the Mig silhouette, the entire surface except the unpainted part is overcoated with light gray.



Light gull gray is retained around the anti-collision light.

The turbine line is slightly slanted because it is painted perpendicular to the engine rather than perpendicular to the fuselage.

Russian green



Radio call numbers are slightly bordered.

Light gull gray is retained on the pop-up door.

This line is slightly slanted because it is a continuation of the forward angle of the trailing edge of the delta wing designed on the upper surface of the wing.

The base color can bee seen in the unpainted area.

Light gull gray is retained on the intake lip.

TACAN antenna is insignia white.

A patch made to commemorate the TAC Meet.

HYAKURI AIR BASE
7TH AIR WING - 301ST SQUADRON F-4EJ 07-8428
SPECIAL PAINTING FOR VIRTUAL ENEMY AIRCRAFT (DECEMBER 1983)

This is illustration is the top surface of F-4EJ 428. The drawing on the lower right shows the silhouette of MiG-21MF layered on the F-EJ drawing in the same scale. Compared to this drawing, apart from the nose and tail, the design drawn on the phantom shows that the plane shape of the main wing is very similar to the MiG-21. In particular, the leading edge receding angle and the slight advancing angle of the trailing edge look almost the same. However, it looks like that only when viewed from directly above. The line across the thick fuselage with a glamorous cubic curved surface is greatly distorted even if the viewing angle changes slightly.

The Hinomaru is glossy because the original one is retained.

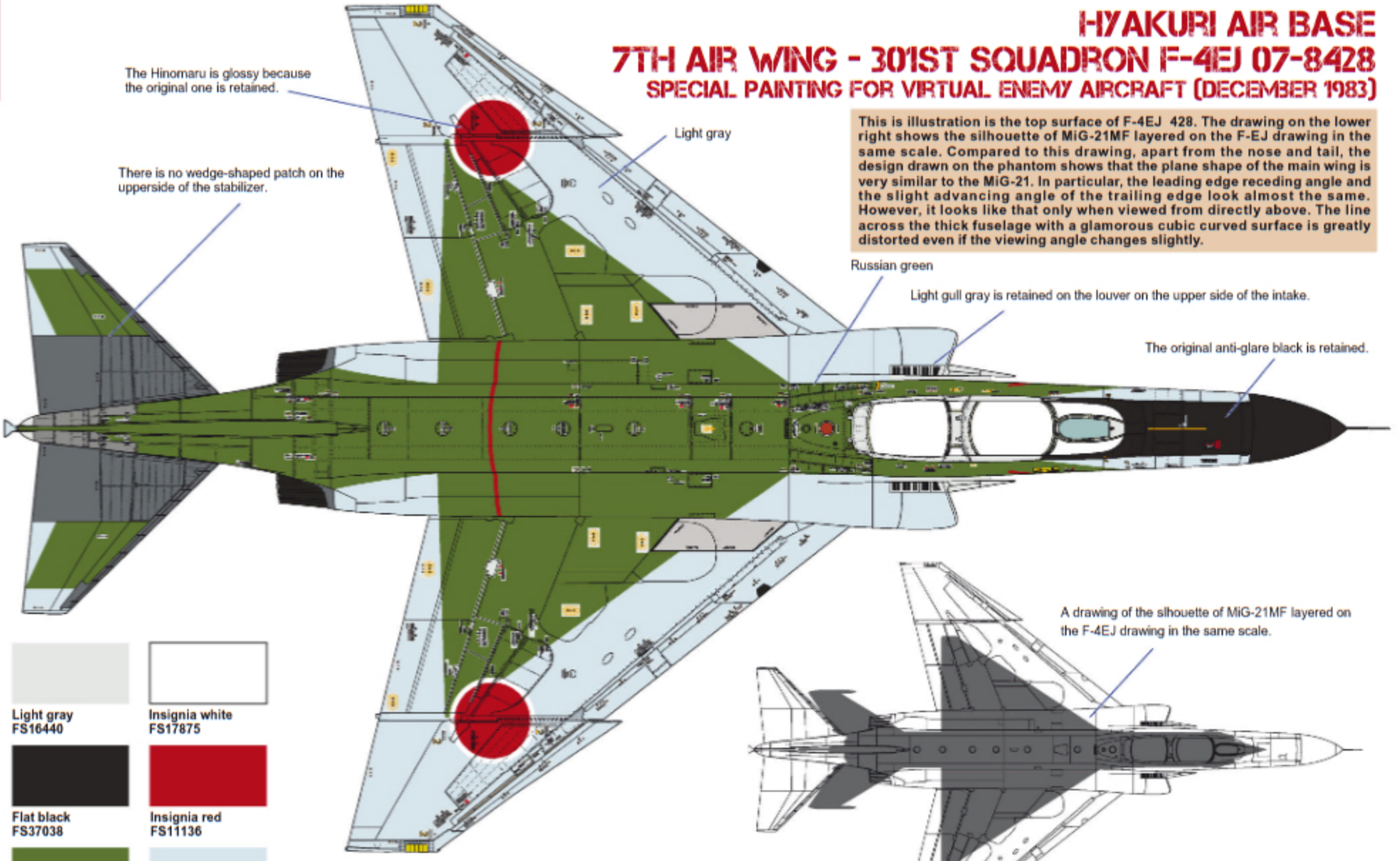
There is no wedge-shaped patch on the upperside of the stabilizer.

Light gray

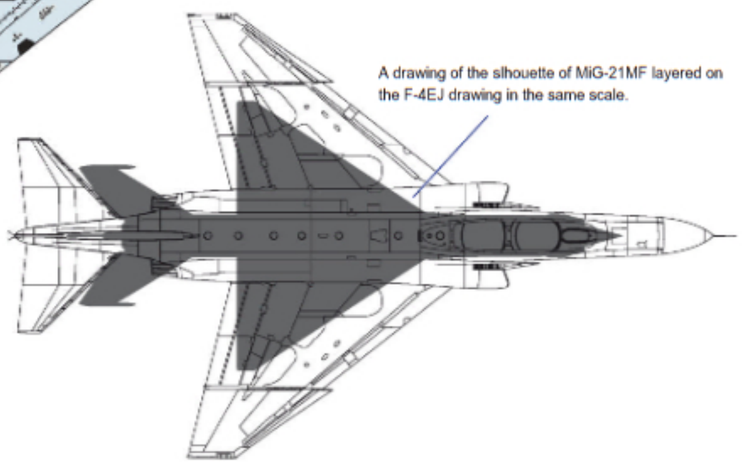
Russian green

Light gull gray is retained on the louver on the upper side of the intake.

The original anti-glare black is retained.



A drawing of the silhouette of MiG-21MF layered on the F-4EJ drawing in the same scale.



Light gray FS16440	Insignia white FS17875
Flat black FS37038	Insignia red FS11136
Russian gray Water-based paint	Light gray Water-based paint

HYAKURI AIR BASE
7TH AIR WING - 301ST SQUADRON F-4EJ 07-8428
SPECIAL PAINTING FOR VIRTUAL ENEMY AIRCRAFT (DECEMBER 1983)

The flat shape of the MiG-21 is beautifully reproduced on the lower surface as well as the upper surface. Moreover, since the lower surface of the phantom is almost flat, there is almost no distortion depending on the viewing angle. What's interesting is the design located on the shock cone at the tip of the MiG-21's nose, depicted in a small space of the Vulcan cannon fairing. The MiG-21's wing is a delta wing, but its tip is slightly cut off. This is also reproduced properly, and it is the same on the upper side. It must have been quite a daunting task to do this painting under the low fuselage.

The wing tip of the Mig silhouette is hidden under the Hinomaru, but the shape of the delta wing of the actual MiG-21 is reproduced.

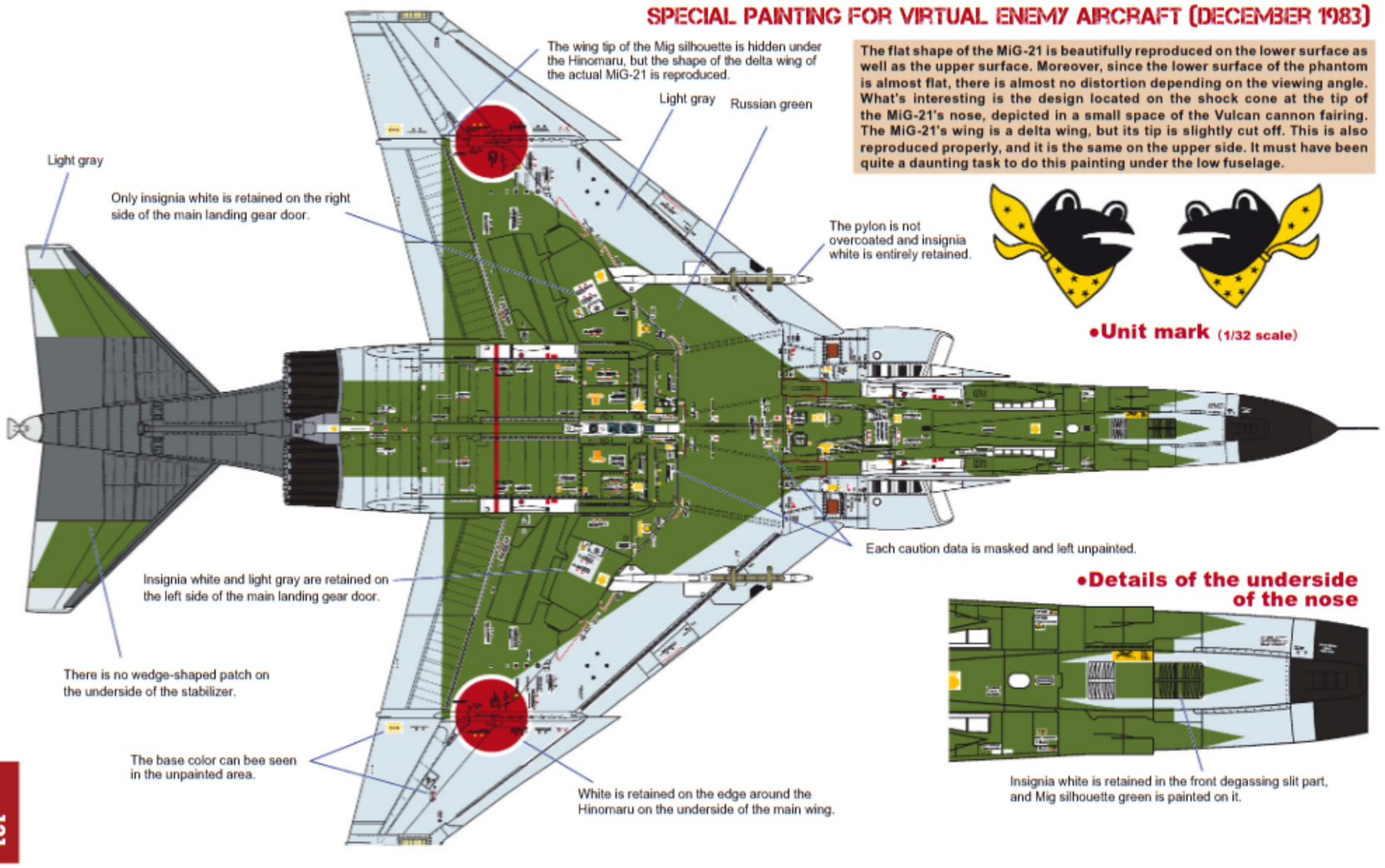
Light gray

Russian green

Light gray

Only insignia white is retained on the right side of the main landing gear door.

The pylon is not overcoated and insignia white is entirely retained.



•Unit mark (1/32 scale)

Each caution data is masked and left unpainted.

Insignia white and light gray are retained on the left side of the main landing gear door.

There is no wedge-shaped patch on the underside of the stabilizer.

The base color can bee seen in the unpainted area.

White is retained on the edge around the Hinomaru on the underside of the main wing.

•Details of the underside of the nose

Insignia white is retained in the front degassing slit part, and Mig silhouette green is painted on it.

The 428 takes off from Hyakuri Air Base Runway 21 in formation. The 1983 TAC Meet painting is retained on the wingman No. 378.
(Photo : February 10, 1984 : Eiki Nakashima)

The 428 taxiing towards the Runway 03 at Hyakuri Air Base. The armament pylon is equipped with a launcher for the AIM-4D Falcon.
(Photo : November 28, 1984: Eiki Nakashima)

The 428 landing on the Runway 21 and gliding while pulling a parachute. This painting had been maintained for a while, and when the 301st Squadron moved to Nyutabaru Air Base, it took off as the first aircraft. (Photo : February 10, 1984 : Eiki Nakashima)

After landing on the Runway 21 at Hyakuri Base, the 428 takes a taxiing toward the ramp area. This Mig silhouette was inspired by the U.S. Air Force's virtual enemy painting and was conceived by the commander of the flight group at the time. The pilot in charge of painting seems to have had a hard time how to put the silhouette of the MIG-21 into the Phantom with many cubic curved surfaces. (February 10, 1984 Photo: Eiki Nakashima)

THE 20TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF THE 301SQ

1

F-4EJ KAI 07-8434

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A commemorative painting aircraft that appeared on the occasion of the 20th anniversary of its founding in October 1993. The design is based on white, combined with the "black vertical stabilizer and red fin tip" since the 1989 competition, and on the nose, main wing, vertical stabilizer, stabilizer and 370 gallon tank, the lines in red, yellow, blue, black are added to give a feeling of the tradition and future of the unit. The body has a logo design with a Phantom Boy with laurel wreath leaves, and the Keroyon mark on the vertical stabilizer is a new design with a shield and hook depicting the newly enacted the 5th Air Corps emblem. In addition, the intake vane and vertical stabilizer have five red stars indicating the 5th Air Corps, and the 370 gallon tank on the right has six Phantom squadron unit marks, with Mr.Keroyon leading the students. This shows that this aircraft is a mother squadron. The emblems of each squadron were lined up in the tank on the left as well. The part of the porous variable vane of the intake could not be painted due to its structure and remained light gull gray, but until the flight, a white painted board was pasted.

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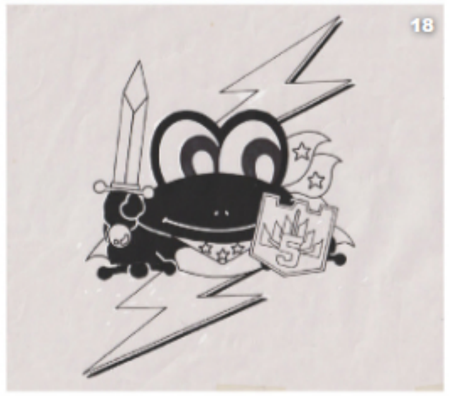
9

ILLUSTRATION OF THE FINAL DRAFT OF "THE 20TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF THE 301SQ"

(Yasushi Kawabuchi)

1. Full view on the right side of the anniversary painting aircraft
1,3. Logos and markings on the right side of the fuselage.
4. View from the front right.
5 Left side of the nose.
6,7. Logo and markings on the left side of the fuselage.
8. Intake vane. Since the multi-hole movable lamp cannot be painted, a white board was pasted before the flight.
9. Newly designed unit mark with shield and halberd of 5th Air Wing mark.
10. Overlooking the anniversary painting aircraft. You can see the shape of the lines on the upper surface of the main wings.
11,12. Crew chief's name on the ram air intake.
13. A 370 gallon tank designed with the marks of Mr.Keroyon and students.
14. Inside of the tank.
15. Anniversary painting aircraft from the rear right.
16,17,20. Anniversary painting aircraft dyed in the setting sun.
18,19. Original illustration of Keroyon mark and Phantom Boy on the fuselage.
(Photos : Isami Akiyama / Only photo of 15 : Eiki Nakashima / Illustration : Yasushi Kawabuchi)



THE 40TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF NYUTABARU AIR BASE

Nyutabaru Air Base, which was opened on the site of the former army IJA airfield on December 1, 1957, celebrated its 40th anniversary on December 1, 1997, and the 301st Squadron prepared a special painting aircraft to commemorate this.

F-4EJ KAI 77-8400

"Since it is the 40th anniversary, we obtained permission to paint the 400 aircraft, and designed it to be surrounded by auspicious laurels to complement around the" 40 "part of the model number. Also, since the main character of this event is the base, I initially set the Nyutabaru Air Base in the background and drew a picture of the F-4 flying vertically from here. However, because it was a little lacking in power, I drew a Phantom Boy and made it a picture that boosts the F-4 with a powerful power like Kamehameha (a special move of SON GOKU in the Japanese animation DRAGON BALL). (Design creator: Hiroyuki Yano)

The original drawing of the anniversary painting hand drawn by Mr.Yano, the inventor of the design. Left: Design of a patch with the anniversary painting illustration. The message "FULL-POWER! 301 TFS" is added to the outer circumference.
(Hiroyuki Yano)

THE 30TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF THE 301SQ

F-4EJ KAI 07-8435

In October 2003, the unit celebrated its 30th anniversary. The special painting aircraft to commemorate the anniversary is based on white, which respects the design of the 20th anniversary, and combines the traditional black tail and red fin tip, and the black nose and shark teeth reminiscent of the 1995 TAC Meet time. The Hinomaru on the fuselage was made into the Rising Sun Flag style. (November 18, 2003, Nyutabaru Base Photo: Hideyuki Ogata)

THE 50TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF JASDF F-4EJ KAI 77-8399

December 5, 2004 Nyutabaru Air Base Festival (Photo: Akira Koyama)

December 5, 2004 Nyutabaru Air Base Festival (Photo: Shigeru Eto)

In July 2004, the Japan Air Self-Defense Force celebrated its 50th anniversary, and each squadron introduced anniversary pain aircrafts. The 301st Squadron painted the entire aircraft in the same yellow color as the scarf of the unit mark and adopted a design that combines the traditional black tail and red fin tip since the 1989 TAC Meet.
(December 5, 2004 Nyutabaru Air Base Festival Photo: Shigeru Eto)

THE 40TH ANNIVERSARY PAINTED AIRCRAFT OF THE FOUNDING OF THE 301SQ

F-4EJ KAI 77-8398

October 27, 2013 Tsuiki Air Base Festival (Photo: Tetsuya Jin)

October 27, 2013 Tsuiki Air Base Festival (Photo: Tetsuya Jin)

On the 40th anniversary of the squadron in October 2013, an anniversary painted aircraft based on dark blue was introduced. Red, orange, and white are sharply designed on the main wing and stabilizer to give a sense of speed, and each part logos are painted in gold. The design of the Rising Sun Flag style at the time of the 30th anniversary is retained with a good sense on the vertical stabilizer.
(October 12, 2013 Nyutabaru Air Base Photo: Hideyuki Ogata)

MODELING GUIDE

- **1:48 F-4EJ Kai Phantom II**
  5th Air Wing - the 301st Squadron F-4EJ Kai 427 Nyutabaru Air Base / Phantom Forever 2020
- **1:72 F-4EJ Phantom II 1980 TAC Meet / Ferris camouflage**
- **1:32 JASDF F-4EJ Phantom II "Mig Phantom"**
- **1:48 F-4EJ Kai Phantom II "First Moo-Moo"**
- **1:72 F-4EJ Kai Phantom II The 301st Squadron 20th anniversary painted aircraft**
- **1:48 Kawasaki T-4 The 301st Squadron**
- **1:72 T-33A The 301st Squadron**

Reproduction of the

brave figure

of the past days with

skillful weathering techniques

F-4EJ KAI PHANTOM II

INFO

Zoukeimura
1/48 SWS48-12
F-4EJ Kai Phantom II

1:48 F-4EJ Kai Phantom II 427 Modeling & text by Masaaki Sekiya

Introduction
The second version of Zoukeimura's Long Nose Phantom II is the F-4EJ Kai of the Japan Air Self-Defense Force, which protects the skies of Japan. The EJ Kai can be reproduced by replacing parts such as the cockpit from the previous US Air Force type E early. There is a detailed explanation about the actual aircraft at the beginning of the instruction, and it will be more enjoyable if you deepen your understanding before start making the model.

Assembly
First of all, let's make the interior of the nose. The back side of the cockpit floor parts also surves as the inner wall of the front landing gear storage and is surrounded by detailed side walls and bulkheads.
There are two methods, one is to paint the leg storage first and then mask it to spray the body color, and the other is to paint the body color and then mask the surroundings to paint the inside of the storage. Here, I paint the three-dimensional parts first in order to paint the details firmly.
Each separated instrument panel were fin-

BUILD

Painting and assembly of cockpit

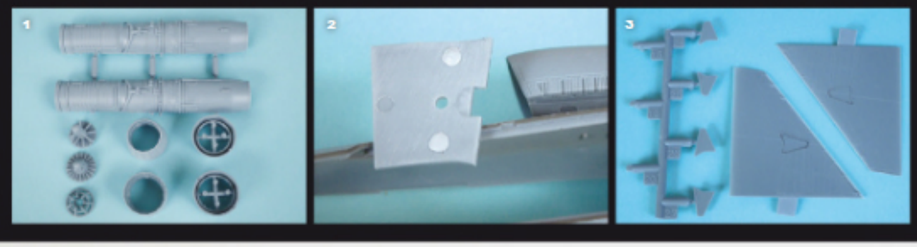
1. The cockpit has a sharp shape, and the meters and the switches are reproduced.
2. The seat belt was made by myself using a lead plate and commercially available parts.

Memories of that days at the Nyutabaru Air Base

5th Air Wing - 301st Squadron F-4EJ Kai 427 Nyutabaru Air Base

BUILD

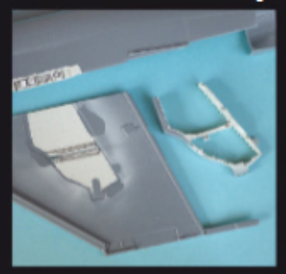
Very important! Pretreatment & assembly of parts.



1. When assembled, it becomes almost invisible, but the engine is accurately reproduced. It is a part that tickles the hearts of the fans. The nozzle has a cross-shaped sprue, so carefully cut it out for pretreatment. **2.** Since the eject pins leave marks on the inner wall parts of the intake, I filled them with lacquer putty. **3.** The patch of the stabilizer is separated. It will be easy to assemble by scraping the inside of the mold of the installation position.

BUILD

Landing gear storage : Paint first? Or paint later?



You may be wondering whether to apply the Landing gear storage first or the entire aircraft first. It depends on the combination of the body color and the internal color, but in the case of a working aircraft with a well detailed mold in the storage, it is often easier to work by painting it first and finishing with the stain.

ished by painting and decals, and glued in the designated place. The details such as the mold are clear, so if you carefully paint the switches etc., it will be a good accent in the dark cockpit. Belts are not prepared for the ejection seat, so I made it myself using commercially available parts. The canopy was masked in the transparent areas with tape or masking sol before gluing the internal frame and rearview mirrors to prevent them from getting dirty with glue.

The left and right parts of the fuselage are assembled by sandwiching the interior of the nose, and then the back parts (R-1, R-17) are attached. It is a good idea to cleanly fill in the traces of the extrusion pin inside the air intake. I corrected the installation position of the bell mouth pitot tube (M-22) inside the intake by relying on the actual aircraft photograph and the panel position of the outer panel. There was a slight gap between the assembled intake and the fuselage, so I putty on it and scraped it to fix it. The air duct and engine are installed inside the fuselage with the bulkhead parts (I-15) sandwiched between them.

In the SWS series, the engine is realistically reproduced, and I painted the details carefully. Once installed, it will not be visible, so it is a good idea to paint only the part that can be seen from the auxiliary air intake on the underside of the fuselage. Cut out the sprue in the center of each part of the variable nozzle cleanly, and polish it carefully with a waterproof sandpaper. Also, when attaching to the aircraft after painting, be careful that the left and right nozzle plates are aligned well.

The stabilizer at the tail of the fuselage is designed so that the wing surface position can be selected up, horizontally, or down by using three types of base parts. In the instruction, it's supposed to be assembled with the stabilizer, but it is also possible to attach only the base parts first and then attach the stabilizer. Considering the efficiency of painting, I decided to add it later this time. The drag chute door (P-4) on the tail was engraved with internal details, so I made it opened, but it will be more realistic if you reproduce the weight reduction hole on the aircraft side.

A mounting hole for the pylon is opened on the main wing for the armament in advance. Scrape off the engraving of the sensor fairing (arched mold near the front edge of the left wing) installation guide for Type E Late version. Since the parts are separated, I tried to lower the flaps and ailerons on the front and rear edges of the main wing. The rear edge part has a dowel for positioning, so cut out the unnecessary part and insert it into the wing. The convex part molded on the flap upper surface parts (E-7 / E-8) actually it should be on the main wing side, so scrape it off. Instead, I glued self-made plastic parts to the wing. The front edge flap is directly attached together with the inner and outer wings. I was a little worried about the gap on the inner wing side if I attach it according to the instructions, so I decided to make it half open in the example.

What you should pay attention to around the phantom's landing gear is the angle of the main landing gear. If the angle of the landing gears is not decided properly here, the landing gear may become turned in. It will be easier to adjust the angle if you sharpen the dowels on the main landing gear a little in consideration of the balance with the actuators (I-6, I-7).

Painting and marking

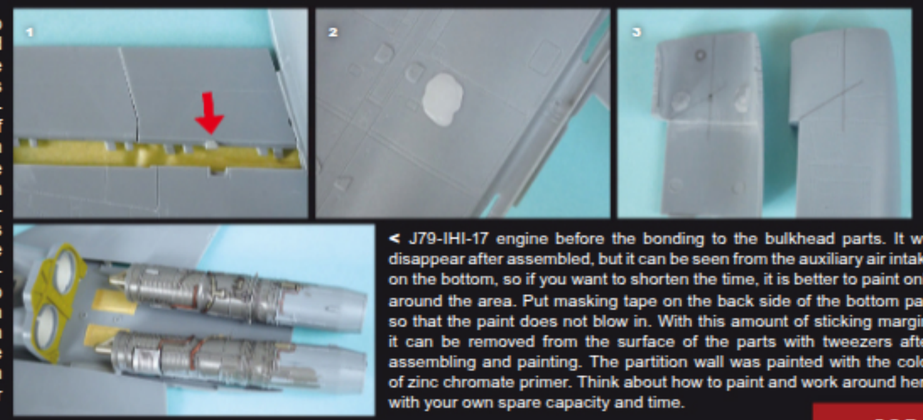
The aircraft is painted in shades of ghost

(to P138)

BUILD

With a little effort, make it look more realistic!

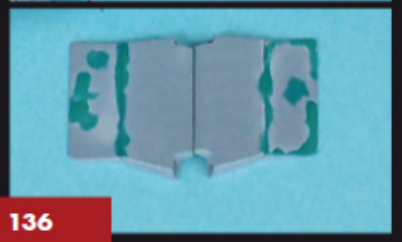
1. There is an arrange to lower the rear edge flap and aileron. Since a part of the panel of the main wing is molded on the flap, the convex part was scrapped off and transplanted to the main wing side (arrow). **2.** The compressed air intake hatch on the underside of the aircraft is Navy type, so it is better to fill it. **3.** Correct the mounting position of the pitot tube inside the intake so that it matches the position of the maintenance hatch on the outer surface. Make a hole at the same position as the hatch on the outer surface.



< J79-IHI-17 engine before the bonding to the bulkhead parts. It will disappear after assembled, but it can be seen from the auxiliary air intake on the bottom, so if you want to shorten the time, it is better to paint only around the area. Put masking tape on the back side of the bottom part so that the paint does not blow in. With this amount of sticking margin, it can be removed from the surface of the parts with tweezers after assembling and painting. The partition wall was painted with the color of zinc chromate primer. Think about how to paint and work around here with your own spare capacity and time.

F-4EJ KAI PHANTOM II

1. The gun scavenging door, which is basically open when the aircraft is parked, was opened. The yaw string hangs like this except during flight. It is recommended to reproduce it with shredded plastic paper or copper wire. **2.** The pop-up door of the drag chute storage part of the tail boom was assembled in the open state because the internal details are reproduced with parts. **3,4.** Fading and choking reproduced by freehand airbrushing and masking sol.



PAINTING

Weathering strategy of the JASDF Phantom

After all, the key points of the JASDF Phantom's air superiority camouflage painting aircraft are the characteristic fading, choking (whitening of the painted surface) and retouching. The JASDF F-4 Phantom II Photobook, published by Model Art, contains a large number of large-format photos that can be used as a reference, so it is recommended to purchase the book. In this example, the entire surface is painted with the air superiority camouflage painting and then gray is sprayed on the rear part of the fuselage and the upper surface of the main wing where fading and choking are noticeable. Freehand painting is done using the material photos as an example. If you spray too much, the air superiority camouflage of the base will not be seen, so spray it carefully with an airbrush, little by little. When you are satisfied with the fading and choking expressions, apply masking sol around the panel lines and hatches that open and close frequently. It is easier to work if you prepare a different brush than the one that comes with the bottle. When the masking sol has dried sufficiently, spray a thin layer of brown paint to reproduce the dirty part and the part that has been cleaned by maintenance. By repeating this work until you are satisfied, you can create a powerful weathering expression.

Although it could not be confirmed that it was installed in the EJ Kai 427 of this example, I also made a dart-type target that is characteristic of the phantom. Based on Hasegawa parts, the rear end of the fin was modified to be at a right angle.

gray and the radome is black. The heat-resistant part of the tail is unpainted. Compared to other countries' aircraft of the same type, the JASDF's aircraft is unique in terms of paint deterioration, repair, and operational stains. The key is how to reproduce these. First, paint with a camouflage base paint according to the reference photos or the painting drawings. The masking sol is then partially applied to prevent any subsequent paint adhering. Then, the fading of the paint, the repainted surface, the traces of the crew's oily gloves, the footprints, the oil leaked from the cabin, etc. are sprayed one after another to reproduce the reality of an actual aircraft.

The decals are made by Cartograf Decal, which is of high quality with almost no margin on the edge. I'm glad the numbers from 0 to 9 are prepared so it can be combined with the serial number set. There are unit marks of ADTW, 3SQ, 301SQ, 302SQ, 306SQ.

The caution data that can be attached on the entire surface of the aircraft is also available. In addition, numbers 108 and 109 will look more like an actual aircraft if they are attached closer to the middle hinge of the rudder on the left side of the vertical stabilizer (third step from the top of the white-tailed eagle on the painting drawing of the kit).

It was a painstaking task to paste all the caution data, but I am delighted when it is completed. It's a very well made kit, although it requires some tweaking.

F-4EJ KAI PHANTOM II

CAMOUFLAGE AND MARKINGS OF USAF - POSTWAR 1

1945 - PRESENT

Illustrations / Explaination by Yoshiyuki Kawano

●Paperback 160 pages ●210mmx297mm ●Language : Japanese

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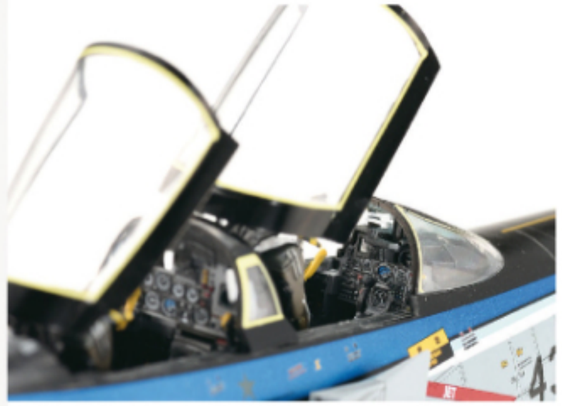
MODEL Art

INFO

Zoukeimura
1/48 SWS48-12
F-4EJ Kai Phantom II
Phantom Forever 2020
Limited edition / Sold out

1:48 F-4EJ Kai Phantom II
"Phantom Forever 2020"
Modeling by Isami Akiyama

The 301st Squadron F-4 Final year anniversary painting



1,2,3. As for the parts of the kit, the size of the FCS square monitor and the round monitor of the radar warning system are different in the front and rear seats, so I replaced them with parts made of 2.5 mm square plastic plate. For a round monitor, first make a small pilot hole and then spread it with a round file to make a beautiful circle. **4,5.** Instrument panel of the actual aircraft. **4** is of the front seat **5** is of the rear seat. Each monitor is about the same size in the front and rear seats. (Photo: Isami Akiyama)

Phantom Forever

Build a special kit of the 10th anniversary of Zoukei-mura SWS!
Prior to the EJ Kai kit introduced on the previous page, I made a limited edition of the final year commemorative painting aircraft kit released by Zoukei-mura. The kit has already been discontinued, but modelers who want to make it can reproduce it by purchasing the regular version and purchasing optional decals. In this section, we will introduce the cockpit improvement points that we would like you to attempt.

The work of the main instrument panel is the key
The side console is a separated part to support each F-4 models. I'm glad that the parts dedicated to EJ Kai are prepared. Switches etc. are formed in a clear mold, so let's paint them finely. The instrument panel is also sharp and well-made. However, the front seat instrument panel feels a little strange ... This is because the radar monitor added to the upper part of the board and the round monitor of JAPR-6 are extremely small. Perhaps the anti-glare parts are thick, and this has made them smaller. On the other hand, the monitor in the rear seat is molded one size larger. After all, this is the face of EJ Kai! So I'm a little sorry to Mr. Zoukeimura, but I corrected it in the example. At the top right of this page, we have placed an example of the modification and a photo of the actual aircraft to help you understand the different sizes.

Keep in mind that you can make it look like a real EJ Kai with a little work.
That's why we introduced a little renovation point. I hope it will be helpful when building the regular version of EJ Kai on sale from Zoukei-mura.

Try Yellow Phantom! 1:72&1:48 Kits & Decals

1/72 & 1/48 kits of Yellow Frog and decals. There are many limited edition items, so if you find one at the store, get it!

KIT

Hasegawa 1:48 F-4EJ Kai Phantom II
"301SQ F-4 final year 2020"
*Limited edition

Hasegawa 1:72 F-4EJ Kai Phantom II
"301SQ F-4 final year 2020"
*Limited edition

Finemolds 1:72 JASDF
F-4EJ Kai 2002 Special Marking (Yellow)
*Limited edition

DECAL

DXM Decal
F-4EJ Kai JASDF 301SQ
"FINAL YEAR 2020"
1:48 #11-4247
1:72 #11-7140

MYK DESIGN DECALS
Ashitano decal 1:72
JASDF F-4EJ Kai Phantom II
301SQ F-4 Final "GO for it!"
1:72 #A-72177
1:144 #A-560
http://www.myk-design.com/tank/

TAC MEET 1980

Paint the impressive Ferris camouflage

F-4EJ PHANTOM II "FERRIS CAMO"

INFO

Finemolds
1/72 JASDF F-4EJ Fighter

1:72 F-4EJ Kai Phantom II Ferris camouflage

Modeling & text by Toichiro Yokoyama

BUILD

The latest kit of 1/72 becomes a masterpiece with further work and spiritual painting

Introduction

This 87-8414 aircraft had participated in the TAC Meet in 1980, and the 301st Sq of that year had been painted in splitter pattern camouflage called Ferris camouflage. The shade of blue and the masking of the cautions are the key points.

Impression of the kit

Most of the dividing lines are designed to match the panel lines, eliminating the need for masking when painting. However, the line to be glued is slightly thicker than the surroundings, and it is quite noticeable with the old EJ paint. The main purpose is to make this as inconspicuous as possible and increase the resolution with easy remodeling.

Cockpit

The details are sufficient with the kit, but since the equipment wiring etc. on the side wall is omitted, it can be added with for example some plastic material, and the partition wall and the back of the rear seat instrument panel are added with 0.3 mm thread solder. In addition, 0.18mm copper wire and plastic material are used to reproduce the wiring and the map case that is partially omitted.

In order to open the canopy, plastic material is attached around the hinge part to increase the thickness. Photo etched parts are used for the lock part on the inner side. And a Nano Aviation series is used for the rearview mirror.

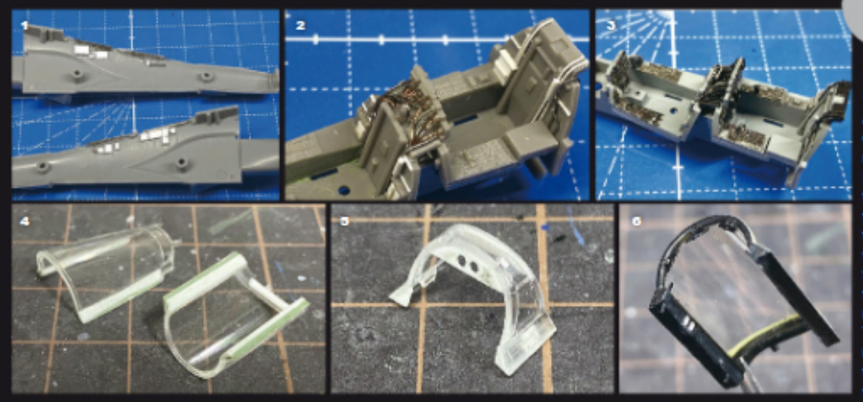
Aircraft

For the most conspicuous rear fuselage back seam, if you spread the parts with for example a hardcover book. before gluing, you will not be worried about the gap. Be careful when doing this, as there is a risk of damage to the parts.

This is a kit that can be assembled in full detail without any modification. However, with further modifications, it will look more wonderful. The features of the kit are very good, so please feel free to challenge yourself.

BUILD

Improve the cockpit in detail



1,2,3. The details of the cockpit of the kit are good. Taking advantage of this, the details have been improved using plastic materials, thread solder, and copper wire. In particular, the equipment and wiring on the side wall and the piping on the back of the rear instrument panel are effective parts to improve the details, so it is better to do it firmly. **4,5,6.** In this example, the canopy is finished in an open state, so the details of the inside of the canopy and the lock mechanism on the fuselage side are also improved. The structural material inside the canopy is reproduced with a plastic plate. Nano Aviation and Eduard etching parts are used for the rearview mirror and lock mechanism.

In this kit, all parts fit well, but there are slight gaps between the tail wing and the front edge of the main wing. Plastic paper is adhered to the adhesive surface of the parts and processed so that it does not feel uneven with the surrounding panel lines. For other parts, remove the parting lines on the adhesive surface and rub it together, then the gap can be removed without putty.

Since there is a small gap only on the rear side of the fuselage in front of the engine nozzle, putty was applied and sanded to level it. Since the panel line of this part is misaligned and does not connect to the bottom surface, it is filled with putty and re-engraved. Originally, the panel lines such as the rear part of the fuselage were delicately engraved, but I engraved more with a 0.05mm BMC chisel and rivets. were removed with a 0.2mm drill to prepare the surface.

Additional rivets are placed on the engine door, rotor blades and unpainted parts on the underside of the fuselage. The panel light of the Nano Aviation series is attached to the EL light (formation light), and the G sensor is also replaced with the company's brass. Positioning will be easier if you use the painting drawings on the Fine Molds website as a guide.

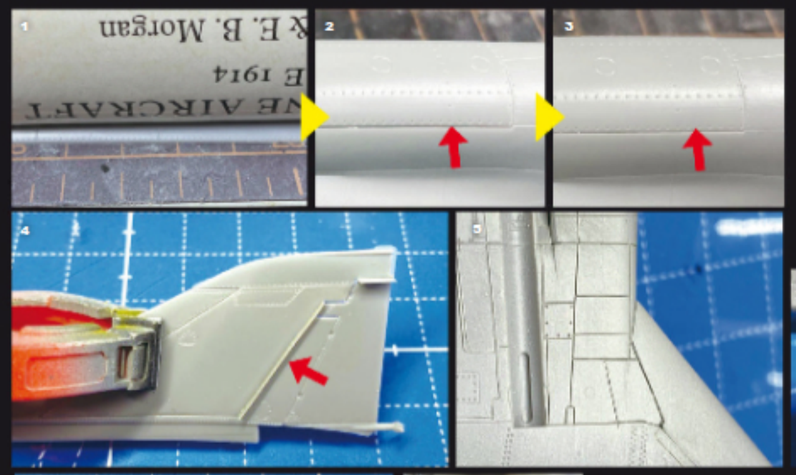
After processing the pin marks inside the intake, it is painted with Gaia Notes Surfacer Evo White to make it the internal color.

(to P146)

BUILD

Point of assembly

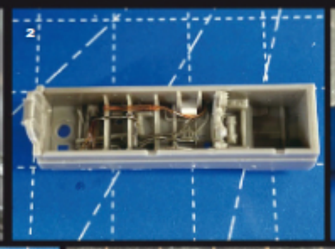
A trick for a beautiful finish.

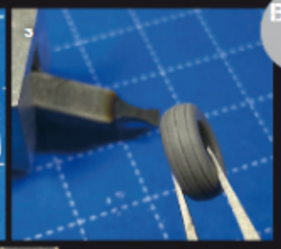


1,2,3. The upper part of the fuselage is made into separate parts along the panel line. By spreading the top part a little*** with for example a thick hard-cover book etc., the seams will not be noticeable. (arrow) **4,5.** The kit fits well overall, but there are some areas where the seams are a little worrisome on the rear part of the vertical stabilizer, the rudder (arrow), and the front edge flap of the main wing. I inserted a plastic paper in to make it inconspicuous. **6.** There will be a slight step on the side of the fuselage in front of the engine nozzle, so use putty to level it.

7. The ejector pin mark inside the intake was processed using putty. **8.** The splitter vane, which gets in the way when painting, can be inserted diagonally and rotated to fit it later.

* Please keep in mind that some parts might be damaged.





BUILD

Point of upgrade of details

1. The boundary layer outlet on the splitter vane was reproduced by carving the part and partitioning with a plastic plate. **2.** Reproduce the piping of the front landing gear storage using thread solder and copper wire. **3.** The unexpectedly noticeable tire tread pattern was engraved with MR.Hull Mold Chisel from GSI Creos and BMC chisel. **4,5.** piping of the landing gear is also reproduced.

Using 3D printed parts

With the spread of LCD-DLP optical modeling 3D printers, printed products have become more commonplace. This time, I used the parts made by V1 Model.

A boundary layer outlet is engraved on the splitter vane and a partition is added with a plastic plate. The vane part can be attached later by inserting the parts diagonally and rotating them.

Undercarriage

Make the piping with brass wire or thread solder, and after painting, attach the chrome finish to the cylinder part of the oleo strut.

The tread of the tire is carved with Mr. Hull Mold Chisel of GSI Creos and widened with BMC chisel. The landing gear storage is also piped. The landing gear cover was thinly shaved using BMC Danmo of Sujiborido.

Pylon etc.

Since the aircrafts of that time were often equipped with the AIM-4 launcher, I used 3D printed parts of V1 MODELS.

Basic painting

Before applying TAC MEET painting, apply the basic painting of the F-4EJ first (old painting: see page 4-6 of this book). The underside is painted with Gaia Notes EX-White evenly, including the landing gear storage. At this time, only the auxiliary air intake port is painted inside first, so the putty etc. is put in to mask it, so that the paint does not blow in.

For the upper surface, first paint the shade part with Mr. color C301 charcoal gray of GSI Creos, and then paint the entire surface with C11 gull gray. C315 gray FS16440 is mottled on it and used as the basic paint. Mask the precautionary statements, toning C72 medium blue and white, and paint two types of light blue, one for the top (dark) and one for the bottom (light). Adjust the ratio by adjusting the ratio to 1: 1 for dark and 1: 3 for light (medium blue: white). Refer to the photos and color charts. Masking will be explained in detail in the next section.

PAINTING

First of all, paint the basic color

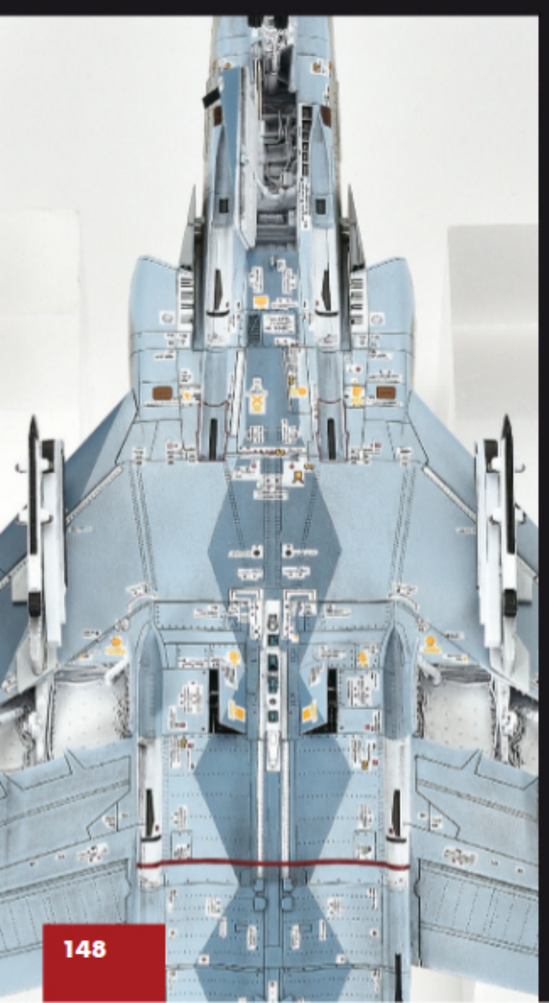
1. Apply Gaia Color EX-White to the entire underside and the landing gear storages. Don't forget to mask the auxiliary air intake. **2,3.** Mr. color C301 Charcoal gray is used for pre-shading painting. Apply C11 Gull Gray all over, but leave the shade thin. **4.** Paint mottled with C315 Gray FS16440. After that, the basic painting is completed.

F-4EJ PHANTOM II

"TAC MEET 1980"

The unpainted part of the tail of the fuselage was reproduced with a unique discoloration using 0.3mm masking tape.

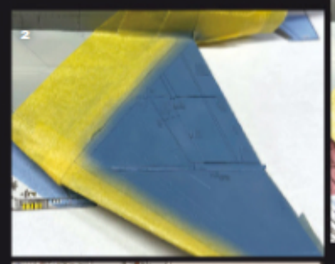
The navigation light is drilled and painted in silver. We dropped a UV resin for crafting from above and reproduced it.

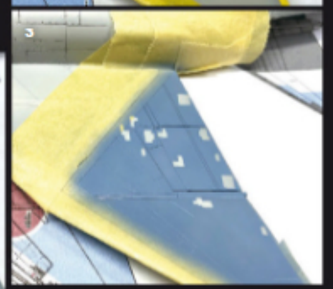


PAINTING

The key to reproducing the special painting aircraft is to leave the cautions unpainted.

Copy the decal sheet to the removable label sticker. Cut it out and make masking stickers for cautions.





JASDF's special painting aircrafts and identification painting aircrafts are overpainted, leaving the cautions written on the base painting. Reproduction of this unpainted part becomes an obstacle, and many modelers may not be able to handle this kind of painting. So, I'm now introducing a method to reproduce the unpainted area.

1. Stick a masking sticker made using decals and label stickers on the basic painting done in the previous section. For the shape, size, and position of the cutout, refer to the photos and illustrations of the actual aircraft. **2.** After pasting, overspray the Ferris camouflage paint color. If you paint with an airbrush, there is almost no risk that it will soak into the label sticker. **3.4.** Remove the masking sticker.

Masking of the cautions

Copy the decal to the label sticker. Cut it out in the same way as the masking on the actual aircraft and paste it in place. Apply the TAC Meet paint color (two toned light blues) and remove the stickers. Repeat this for each section on the entire surface of the aircraft.

Weathering

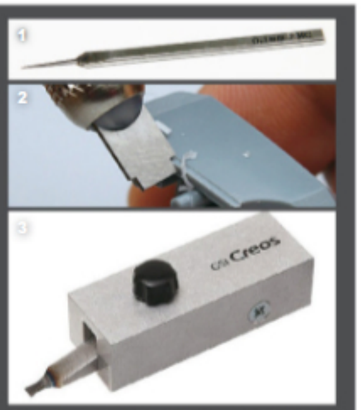
The basic color is slightly solid on the lower surface, and the upper surface is painted unevenly. Lightly filter with the supernatant of Mr. Weathering Color WC01 Multi Black from GSI Creos. Wash the moving blades and the panel that opens and closes with black enamel paint. For the parts that get dirty during maintenance, I rubbed the precipitates of the Weathering Color and drew the stains with water-base color pencils.

Finish

The walkway and turbine line on the upper surface of the main wing are finished by painting. The unpainted part is painted separately with Gaianotes star bright silver and duralumin for each panel. The underside of the pennib is titanium silver. Masked with a 0.3mm wide masking tape and painted in black to express mottled discoloration. After removing the masking tape, I oversprayed a thin layer of semi-gloss black. The exhaust pipe is made by adhering a nozzle of the Iris Resin to the kit parts and painting it with Mr. Metal Color MC212 iron on Gaianotes 121 Star Bright Silver. After that, it is washed with enamel black. The navigation lights on the upper and lower surfaces of the fuselage were removed with a drill, then painted with silver and filled with UV resin. Ashita decals are used for the caution datas and unit marks (1/72 JASDF F-4EJ / EJ Kai Phantom II "Caution Data" ver. 2.0 · 1/72 JASDF F-4EJ Phantom II "Unit Insignia & Serial Number"). The serial number is a custom-made letter. Finally, I adjusted the gloss with LP-24 semi-gloss clear of Tamiya's lacquer paint. Fine Molds are used for the pitot tube, and Master' brass is used for the AOA probe.

Check the parts and tools used!

1. Fine Models AA-52 1:72 Pitot tube set for F-4 EJ/F-4/EJ Kai
2. AIRES 1:72 F-4E,F,G,J,S Phantom II Exhaust Nozzles
3. V1 Models 1:72 AIM-4 Pylon
4. MASTER 1:72 ANGLE OF ATTACK
5. Fine Models NA-15 1:72 Rear view mirror and Formation light for Jet fighter
6. Fine Models NA-10 1:72 Modern Aircraft Seatbelt Set #4 (for F-4, F-8 series)



1. Sujiborido : BMC Tagane (chisel)
(Blade width : ZERO/0.05/0.075/0.1/0.125/0.15/0.2/0.25/0.3/0.4/0.5/0.6/0.7/0.8/0.9/1.0/1.2/1.5/1.7/2.0/2.5/3.0/4.0mm) I recommend ZERO and 0.05mm for aircraft model
2. Sujiborido : BMC Danmo
(Step drop width : 0.2, 0.4/0.3 · 0.6/0.5, 0.8/1.0, 1.5mm)
3. GSI ZCreos : Mr.Hull Mold Chisel

V1 Models: https://v1models.booth.pm Sujiborido: https://sujibori-do.ocnk.net

Mig Phantom

Reproduction by deep research and study.

INFO

TAMIYA 1:32 McDONNELL DOUGLAS F-4EJ PHANTOM II JASDF

1:32 F-4EJ Phantom II "Mig Phantom"

Modeling & text by Masaaki Sekiya

The so-called "Mig Phantom" is an essential element of the 301st Squadron. Let's make this impactful aircraft in a big 1/32 scale!

The truth about Mig silhouette

It is unclear how the idea came about, but it seems that it was the commander of the 7th Air Wing flight group at that time who approached the 301st Squadron. I asked a person who was formerly involved in the birth of this aircraft's painting, and he said, "I don't remember the details because it was a long time ago. If I remember correctly, I think the commander of the flight group at that time asked me if I could somehow make the phantom look like the MiG-21."

It seems that there was an aggressor squadron of the U.S. military involved, but I do not know whether the commander had personally kept the idea in his mind on a daily basis or whether the momentum of the Air Wing was increasing. In any case, the purpose was to embody a virtual enemy's aircraft used for normal training, including the combat maneuver course that was set up in the squadron.

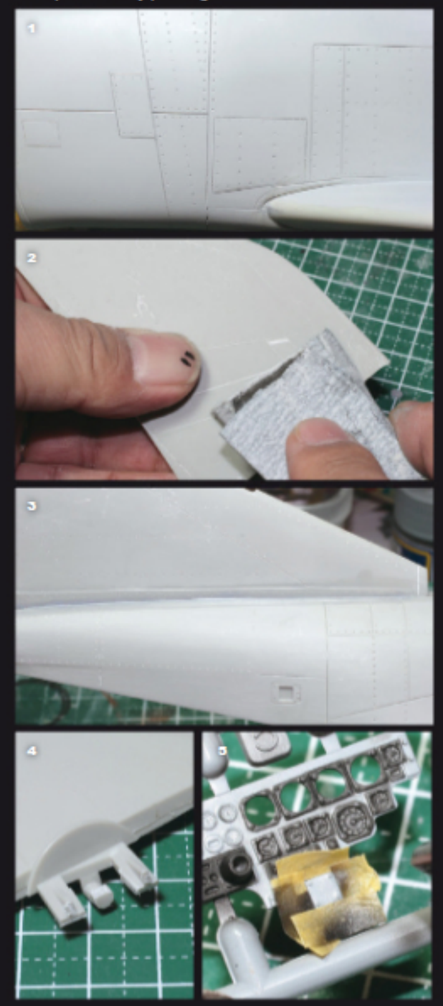
In response to that idea, he created a drawing on paper with the MiG-21 superimposed on the phantom, and based on that, he carried out the painting work. And that aircraft was completed. However… It sounds like a simple story, but when it comes to actually transferring the design from the paper onto the cubic curved surface of the actual aircraft, things couldn't have been smooth.

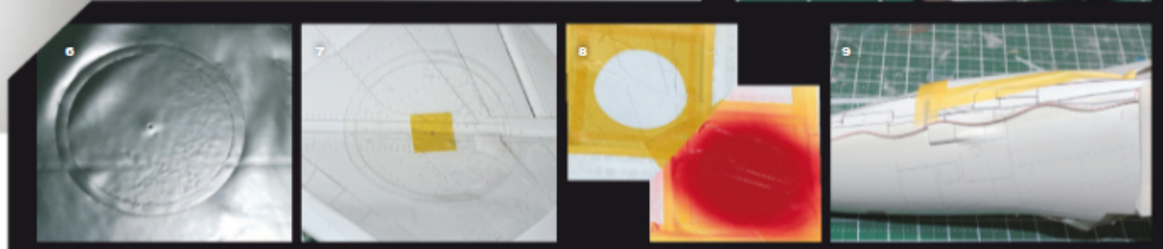
The biggest obstacle is the difference in fuselage width between the two. Aside from the underside, if you overlay the silhouette of the MiG-21 on the top view of the phantom, the area around the base of the delta wing overlaps the large shoulder of the phantom. Even if it could be drawn in 2D, it is clear that in 3D it would not be an accurate delta wing shape unless it is viewed from directly above, and it is quite difficult to draw an accurate straight line on that glamorous cubic curved surface.

Even if it can be drawn well, the silhouette seen from the side will be incomplete. How-

Point of assembly and basic painting

1. There are molds that reproduce the panel itself three-dimensionally on the side of the intake, the upper part of the fuselage, the main wing, the vertical stabilizer, etc., but since the F-4EJ of 1984 had a beautiful surface, those molds were scraped and re-carved. **2.** The cross section of the vertical stabilizer is too bulging, so adjust by scraping the surface. The thickness of the trailing edge of the rudder was adjusted and the three-dimensionally molded panel was removed at the same time. **3.** The stabilizer is divided into left and right so that it can be attached after painting. **4.** There is a slight gap at the base of the vertical stabilizer, so I filled it with putty and leveled it. **5.** For radar scopes and large instruments, that clear parts are fitted from the back side, and the instrument decals are attached from the back side. Decals are not prepared for other instruments, so both front and rear seats are reproduced by painting.





6. Cut out a double circle of Hinomaru and white edge from the masking sheet and pick it up with a slightly larger sheet. **7.** Mark the center with tape and set the sheet accordingly. **8.** Remove the sheet of the inner circle of the double circle and spray red. The insignia white that has been sprayed in advance becomes the white edge of the Hinomaru. Leave the masking on the white edge as it is, mask the red part and paint with the aircraft color. **9.** The paper pattern cut out from the illustration was used to paint the top and bottom of the aircraft separately. To fix the pattern, double-sided tape rolled into a twist was used to raise the edges. Mr. color No. 315 was used for light gray.

ever, if you tried to draw the silhouette of the side accurately and painted the area from the intake side to the front of the engine nozzle with green, the plane shape would look strange, and it would not look like the silhouette of the MiG-21.
Moreover, there is a large canopy and anti-glare black pain at the place where the characteristic outline of the nose tip is drawn, so it cannot be drawn on the upper surface of the nose. Because of the Vulcan cannon fairing on the underside, the design would be incomplete which is an unimaginable story, but I'm sure it was a difficult decision to make for that pattern. Furthermore, it was instructed that the cautions on each part of the aircraft should not be painted, and many parts were left unpainted by masking. Therefore, the impression that the finished painting gave was quite different from the design on the paper.

Painting of the actual aircraft

I think that the work was done by the maintenance platoon, led by the chief of the aircraft, but the most difficult thing was probably the masking and painting on the underside. The height from the ground to the underside of the phantom's fuselage is quite low, so all work was done by bending over. Almost all cautions on the aircraft have been masked. This is a pretty painful task. As for the painting work, they had to move with the spray gun facing up and crouch down to paint the entire underside.

MIG SHOCK!

MiG suddenly appeared at Hyakuri base in December 1983. In the April issue of Koku-Fan (released in February), a close-up photo of the left side of the nose was placed on the cover, and 4 pages were used to introduce the aircraft under the heading Migshock.

Visual effect of Mig Phantom

When we asked how this paint looked like in reality, several former officials said: "No, it looked like a phantom no matter how you look at it." If you look at it on the ground or calmly from a wingman during a cruise flight, it will surely look like a phantom, but if you compare from the boarding aircrame, it feels a lot different.
However, it seems that the way it was painted was not only a matter of feeling, but actually created a visual effect. It does not mean that "it looks like a MiG-21, it can go unseen", but depending on certain conditions such as the weather, the light gray on the outer circumference of the aircraft melts into the background and only the part painted in green is recognized, so the aircraft can be seen smaller than his actual size. Therefore, it could make others feel that "the sense of distance is completely different" compared to the phantom with normal paint.
Even if it is recognized as a phantom, it seems that even a veteran could feel like having a "momentary illusion" in intense maneuvers such as ACM. Also, there is a limit to the distance at which the color of an aircraft can be recognized, and if the object is far away, it will only look black. Even in this situation, the glossiness of the aircraft has an impact, and if the aircraft shines even for a moment during the maneuver, it can be fatal, so it is better to avoid gloss.

PAINTING

How to paint the Mig silhouette! 1

1.2. Prepare commercially available masking type inkjet paper and print the decal sheet at the same size. Cut the marks out and paste them on the relevant parts. **3.** Mask on the left side of the nose. If the position of the red Danger Arrow before the intake shifts, it will greatly affect other positions, so be careful when deciding the position. **4.** Light gray is sprayed. The color is completely matte and the color tone is bluish. **5.** Mig silhouette masking result. Decide the line by taking points on the marking and panel line.

F-4EJ PHANTOM II
"MIG PHANTOM"

On that point, the MIG Phantom was entirely covered with matte paint, so it would have been much less visible.
The 301st Squadron moved to the 5th Air Corps at Nyutabaru Base in March 1985, but this painting seems to have been effective during training, and was maintained for a while after moving, and also used as a toe ship with a dirt target.
After that, the Keroyon mark on the vertical stabilizer was changed to a smaller size than specified (to make it smaller than the Hinomaru on the fuselage), but by erasing the original large mark, the original light Gull gray was left in the silhouette of a frog mark, and a slightly smaller mark was marked in it. By the way, it seems that the original large mark was painted using a paper pattern, and the smaller mark was a transfer sticker. Of course, the number of stars in the scarf was changed from 7 of 7 Air Wings to 5 of 5 Air Wings.

Paint the Mig silhouette

To paint the Mig Silhouette, first mask the service markings such as caution datas, serial numbers, radio call numbers, unit marks, etc. marked on the original Insignia White FS17875 and Light Gull Gray FS16440 (both are gloss colors), and then paint it in light gray and green, which are water-based matte paints.

Let's start with masking!

After assembling, mask the aircraft painted with the basic color. Please refer to P150-151 regarding the assemblage and basic painting. For masking, the decals of the kit were scanned into a PC and printed on sticker paper in their original size.
Although it is paper, in the example, I use Sanwa Supply's "masking tape for inkjet printers - free cut type". The material of this paper is fluffy, but it is thin and easy to fit in, and it doesn't float after being applied.
Then, the printed mask is cut to resemble the masked shape of the actual aircraft. It is impossible to reproduce it 100% accurately, but let's cut it patiently as if you were the captain of the aircraft, while referring to the actual photo.
We haven't seen the actual work on the actual machine, but looking at the example of the painting work on the F-15 of the aggressor, the masking work should be done by multiple people, and the method differs depending on the person. For example, by masking the words one step at a time, the sides are stepped on some places, and the words are roughly hidden with a large square mask. There are various masks, so let's proceed without worrying too much.
However, the masking outline should be made as accurate as possible, on places where it is easy to verify, like on the nose and other conspicuous parts.
The cautions, the cut masking paper, are

pasted on the relevant parts by referring to the instruction manual in the same way as pasting decals, but pay particular attention to the positions of the elements such as the serial number, radio call number, and danger arrow in front of intake. You can Also refer to the illustration posted on P99. The position of each marking is reproduced as accurately as possible.

By the way, the unpainted part of the louver on the underside of the Vulcan cannon fairing is a little different from the others. If you think about it, mask the slits, then paint light gray and green on it, and then remove the masking tape, so the entire part of the slits is left unpainted in Insignia White. Then, the part that imitates the nose tip of MIG painted on this slit part disappears, so only that part is directly painted in green on the white louver part. Whether this was planned from the beginning or whether it was noticed and repainted during the work is hard to confirm now, but it's an interesting point. The armo mark on the left side of the nose (the frame for writing the onboard aircraft armament) is partially painted with the original light gull gray to make it easier to write with a grease pen. This time, let's try to reproduce this accurately.

Light gray painting

This aircraft does not seem to be painted at first glance, but the parts other than the Mig silhouette are painted in matte light gray. The original light gull gray is left as it is on the unpaintable parts such as the intake vane and intake lip.

The light gray color is a slightly bluish gray. If you haven't seen the actual aircraft, it seems to be slightly more bluish than the gray of the F-15.

To compare with an off-the-shelf product, GSI Creos Mr. color #308 seems to be close. But in this example, matte bright light blue color mixed with the Mr. color #338 light gray with almost no bluish color and a bit of of GSI Creos Mr.Color : Color Tune Pigments : Cyan (CR1) is airbrushed.

Painting of the Mig silhouette.

The tone of this color is a little difficult. Those who knew it at the time testified that it was a pretty bright color. However, I think that green was not made by mixing several kinds of colors on site, but was ordered by specifying it from a color sample prepared (or at hand) by a painter. Of course, there were no materials left at that time, so the color numbers of the paints are unknown.

Looking at the close-up photos of that time, there was a considerable unevenness in the painting. Some media explained that it was "brush painting", but it is clear that the uneven painting was caused by spray gun. It's usually more unrealistic to brush that big aircraft. It can also be a thick coat.

The color tone is important, but depending on the photo, it may look like an olive-green (greenish brown) or it may look quite dark. Somehow there is no decisive factor, but as long as there is nothing left from the original, we have to decide what will serve as a standard. Therefore, in the example, I referred to the color tone of the photograph published in the April 1984 issue of KOKU-FAN.

Although it is a printed book, it should be as close to the color of the actual aircraft as possible because this specialized magazine mainly focuses on photographs! Well, as long as I can't confirm with the real aircraft, something has to be used as a reference.

I scanned the positives taken by my friends and also referred to the images that were level-corrected in Photoshop. And, in the example, I tried toning the green by adding yellow and black based on GSI Creos Mr. color 135 Russian green (1). Well, it feels good to use Russian green as it is, but personally I find it a little too bright.

Markings

After finishing the Mig painting, remove the masking on all parts and stick the decals. The transparent part of each decal should be trimmed as much as possible to make it the result look better. It's a little troublesome, though.

By the way, in the decal of the kit, all the letters such as cautions and panel numbers are printed in gray. However, on the actual aircraft, the letters are in black on the light gull gray base color part of the upper side of the aircraft, and the letters are in gray on the insignia white base color part of the lower surface of the aircraft, as well as on the part that overlaps the radio call number on the side of the nose. However, there is no optional decal in 1/32 scale released, so the decal in the kit is used as it is in the example.

The size of the toad of the 301 Squadron (also called Keroyon in the department) is instructed to be printed "within the diameter of the Hinomaru of the fuselage", and in the example of the Mig Phantom, it was a giant toad before that instruction was issued.

There is no choice so we ordered an original instant lettering for the black part of the frog mark with the serial numbers and radio call numbers.

After painting the yellow color of the scarf, I put the lettering on top of it.

However, if you want to reproduce the appearance it had after moving to Nyutabaru, you can use the decals of the kit.

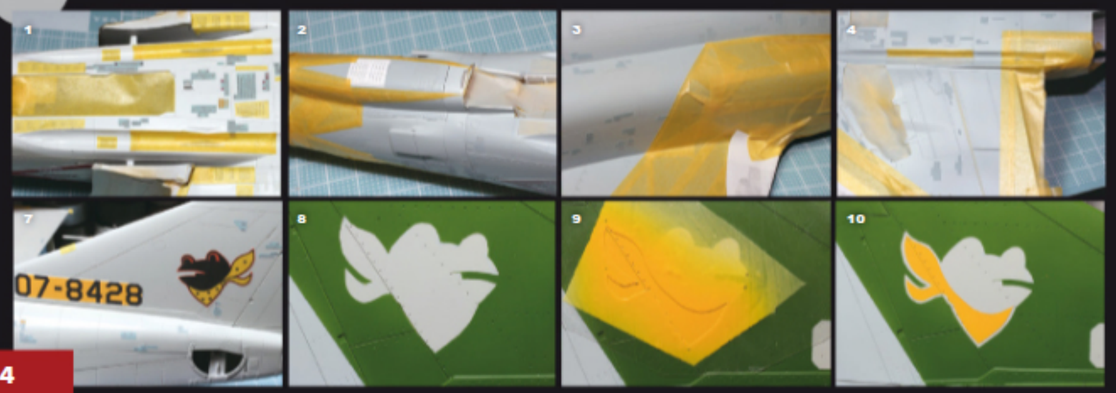
Therefore, the Mig Phantom was completed.

With a design that requires different colors, the positional relationship between the line taking and the caution data is quite severe, and if the unpainted position significantly deviates, it will be problematic, since the whole design will be affected.

In order to solve this, it is important to paste the data in the correct position, and for that purpose, the accuracy of the panel line is also required, so the more I think about it, the more troublesome it is.

Still, the Phantom of that time had many designs I would like to recreate.

PAINTING **How to paint the Mig silhouette! 2**



1. Masking on the underside of the nose and near the front running gear storage. In addition to the cautions, each louver and sparrow launcher were left unpainted, so mask them together. **2.** The MiG-21 shock cone was also drawn on the fairing part of the vulcan gun. **3.** Masking from the fuselage to the main wing. In order to draw the silhouette of the delta wing on the cubic curved surface, I took a line by looking at the aircraft from directly above. **4.** The state of the lower surface. Just before painting, press the panel lines and the part, where the tapes overlap, with a needle to avoid gaps. Since the underside of the aircraft is almost flat, the silhouette of the MiG-21 looks the most beautiful. Make sure that each line be a straight line. **5.** The planar shape of the delta wing accurately represents the outline of the actual MiG-21. **6.** The paint color of Mig Silhouette was adjusted based on Mr. Color C135 Russian Green (1). **7.** The size of the unit mark is different in the decal of the kit, so I decided to reproduce it by painting and lettering. First, mask the outline of the mark and finish painting of the Mig silhouette. **8.** Next, mask the scarf and spray yellow-orange. **9.10.** Yellow-orange sprayed and mask removed. **11.** Transferring the original letter. **12.** This is the instant letter created this time. I had a printing company print it.

Making the "First Moo-Moo" TAC AIR MEET 1992

Many people are fascinated by special painting aircrafts in aviation magazines. However, when it comes to making it, the problem is how to deal with the unpainted caution data and overspray. In this chapter, I would like to introduce the techniques.

F-4EJ KAI PHANTOM II "MOO-MOO-GO"

HASEGAWA 1:48 F-4EJ Kai Modeling & text by Isami Akiyama

Many of the aircrafts participating in the TAC Meet hosted by the Air Defense Command were appealing aircrafts. In the past, F-104J, F-4EJ, F-1 and others participated in ACM, escort combat, anti-ship attack, and organized combat between different or similar models. Each of the participating aircraft was given a camouflage that had been researched by each squadron. It's very attractive for modelers, but it's really hard to get started ... There is no doubt that the biggest obstacle is the unpainted cautions on the entire aircraft.

In addition, because there are restrictions on the shooting position, all the photographs published in aviation magazines have similar angles, and one of the reasons is probably that it is difficult to grasp the exact camouflage pattern.

Check the painting specifications on the example model

In the case of the example n°437, the camouflage color are labeled RI-1003 for light gray and RI-1005 for dark gray from the standard color sample book (R version) issued by the Japan Paint Manufacturers Association. It is not a mixture of black and white, but a water-based paint of the specified color that has been provided and painted.

The pattern is a typical cloud camouflage. Since the competition has been held from July 20th around the end of the rainy season, it is was assumed that the airspace would be covered with clouds (In reality, it was just after the declaration of the end of the rainy season). In fact, the airspace on the day of the competition (July 20th) was fine, but clouds began to appear in the afternoon, and the 301st Squadron became a superb team, probably because of the effect of this camouflage painting.

The original paint is left on the underside of the aircraft, and on the other parts, Hinomaru, serial numbers, radio call number, and intake Danger Arrow are lightly oversprayed with camouflage. In addition, the rescue-related cautions are of course left as they are, so I will attach the decals directly after completion.

About masking procedures

The procedure I often introduce is to mask the causitons part beforehand and then apply the decals after the painting is completed, but for this time, I first finished the marking of the data as in the actual machine. Then, I directly masked it.

Roughly speaking, the procedure is ...

1: Finish the normal painting
2: Masking the Hinomaru and decals
3: Apply camouflage paint
4: Remove the masking
5: Apply overspray

Finish the normal painting

I used Hasegawa 1:48. Since the purpose of this example is the painting, so the kit itself is assembled directly. As for the Unit 437, it was still in the old painting with light gray and insignia white in 1992. In addition to the fact that the actual aircraft was gloss-painted, the entire surface should be gloss-finished for a better adhesion of the decals.

In the actual machine, the Hinomaru is oversprayed in camouflage color. I decided to paint it, because the decals would make the gaps noticeable with overspray.

GSI Creos's Mr. color No. 1 was used for Insignia White (FS-17875) on the underside of the aircraft, and No. 315 was used for light gray (FS-16440) on the top surface.

The top and bottom of the aircraft are painted in a wavy shape. The masking tapes used for this step will be reused for later camouflage painting, so do not dispose of it.

After finishing the basic painting, remove all masking including the Hinomaru. This will allow you to apply decals and to erase the steps in the paint on the Hinomaru.

In particular, the level difference between the paint due to masking becomes quite noticeable by overspraying, so it is better to smooth it with water resistant paper of 1000 or more (extra-fine). This filing work removes the gloss around the Hinomaru, but in any case, the matte gray will be oversprayed on the area anyways, so there is no problem with leaving it matte.

Attach the decals

The important point of this painting work is to apply decals before masking. Decals are not so easy to peel off if they are firmly attached. I used to use gum tape to remove the decals that I accidentally applied. "Masking on decals" is fully possible using masking tape with a weak adhesiveness.

The best way to ensure that the decals adhere is to use a softener. Here, Mr. Mark Setter of GSI Creos is used. When used directly from the bottle, some softeners might be too strong and damage the decal, so it is necessary to add water to find the proper concentration. Adjust the concentration of the liquid using unnecessary decals.

First, apply a softener to the position where you want to apply the decal. Place the decal on it and position it. Once the position is fixed, roll a slightly moistened cotton swab (a dry cotton swab may cause the decal to stick) on the decal and firmly adhere it to the surface of the aircraft.

The decals such as the serial number, radio call number, red triangle mark on the intake, and rescue mark do not need to be bordered, so they should be attached after the camouflage painting is finished.

After applying the decal, leave it for 2 to 3 days to dry it completely just in case.

Make your own masking sheet

Making your own masking tape isn't necessarily difficult. In this case, just copy the decal to a removable label sticker. Cut them out one by one and apply them on the decals. It's like sticking decals twice, but the shape of the cutout of the stickers affect the degree of perfection, so if possible, spend a couple of days working on it.

Mask the Hinomaru again

Overspray on the Hinomaru is also an important part of this example. In the case of the 437, the oversprayed Hinomaru can be seen quite clearly, so I want to do it separately from the camouflage of other parts. To do this, I need to mask again here. However, it is quite difficult to mask a circle that has been taken off once, and even if you use a circle cut out to the exact same diameter, it will always shift.

Therefore, if you cut out the masking tape in a circle with a width of 2 to 3 mm and apply it little by little along the outer diameter, there will be no noticeable "misalignment".

However, even if masked by this method, the size might not be enough depending on how it is pasted. Even so, it's 2 to 3 mm at most, so don't try to force the diameter to match, just drop a masking sol on that part to adjust. In addition, the turbine line at the rear of the fuselage was also reproduced by painting, so this part should also be masked.

Paint camouflage

After the masking work is completed, the masking tape once removed is reused again to mask the insignia white part on the lower surface.

Then, paint the camouflage color with light gray first, followed by dark gray. A paper pattern based on the 1/48 drawing is used to paint both colors separately.

The camouflage color was is adjusted with Mr. color, but the blending ratio is adjusted from our impression of the actual aircraft, and the color sample book.

Overpaint on the painting

After finishing the camouflage painting, remove the masking of the Hinomaru and even out the paint with water resistant paper of 1000 or more (extra-fine).

Then, finish the turbine line at the rear of the fuselage in the same way, and attach the decals of the serial number, radio call number, and red triangle mark of the intake here. Cut off the margins of the number decals as much as possible.

After that, overpaint according to the camouflage pattern, but in that case, the pattern used for camouflage painting can be reused.

Remove the masking of cautions

After all the painting work including overpainting is finished , remove the masking of cautions. This is the end of the work on the unpainted part, but this method seems to be effective when the masking is done properly, like on the aircraft of the example or the F-15DJ of the Tactical Fighter Training Group.

PAINTING How to reproduce the camouflage overspray on the markings?

A highly accurate drafting compass cutter (circle cutter) was used to mask the Hinomaru.

The thickness of the decal will be noticeable when overpainting, so it's painted. Take off the masking.

Smooth the uneven surface of the paint caused by masking with water resistant paper of 1000 or more.

The cautions are masked after attaching the decal. It must be firmly attached to avoid coming off when the masking is removed.

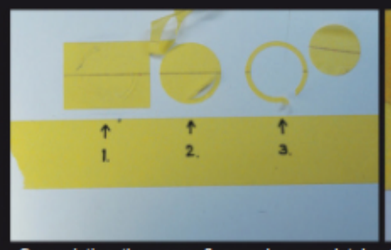
Make a masking sticker for the cautions by copying it onto a removable label sticker.

Cut out the marks one by one. It's a laborious process, but it will greatly affect the finish, so be careful.

After the decal has dried, apply the masking stickers. If silvering has appeared, try to replace it if possible.

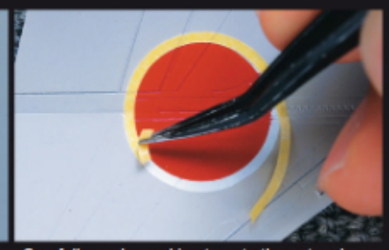
Attach them on the fuselage. If the area is small, you can still position them even with an opaque mask seal without problem.

The masking process is complete. If you don't spray too much paint, the paint will not soak into the paper sticker.



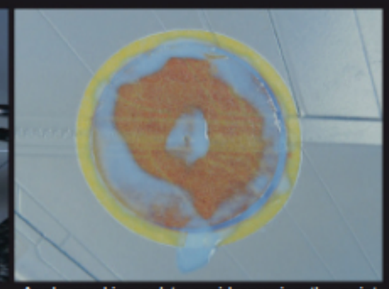
Overpainting the camouflage color completely hides the Hinomaru, so you need to mask the Hinomaru again.

Cut out the masking tape in a circle with a compass cutter. Cut one part and adjust the diameter when pasting.


Carefully apply masking tape to the outer shape of the Hinomaru. It's easier to apply with tweezers.

Finish masking the outer circumference of the Hinomaru. There is a gap on one spot to adjust the diameter, but you don't need to care about it for the time being.

Mask the entire Hinomaru using the circular tape which was cut out from the mask's outer circumference earlier.


Apply masking sol to avoid spraying the paint into the gaps and compass holes. Apply it to the gap on the outer circumference.

Cut the dried masking sol along the outer masking tape. Be sure to use a new blade when cutting the sol.

The Masking of the cautions and markings is completed in preparation for the camouflage painting.

Reuse the masking tape used for the basic camouflage painting. It is convenient to make a note of the part used.

Apply the first camouflage's color. The Light gray was toned using Mr. colors in white, black, and red. Make it matte as it is on the actual aircraft.

Make a paper pattern from a 1/48 painting drawing for masking the first color. Cut it first into a larger size then adjust the size according to the aircraft.

Since the border of the Moo-moo camouflage is shading off, twist the masking tape in order to make the pattern paper float.

Remove the masking of the Hinomaru and overspray thinly on the Hinomaru only. The border of the camouflage is sprayed with the paper pattern.

Next, attach the radio call numbers and serial numbers decals, and lightly overpaint.

End by attaching the markings on the parts which are not overpainted.

Still active!
Building Hasegawa's F-4 classic kit.

F-4EJ KAI PHANTOM II
"301SQ 20TH ANNIVERSARY"

I realized that the Hasegawa's 1/72 scale was actually quite old, but since the proportions are pretty good, there are many possible variations, and it is inexpensive, this kit can still be enjoyable.

INFO

HASEGAWA 1:72
F-4EJ Kai PHANTOM II
"301SQ 20th Anniversary"

1:72 F-4EJ Kai Phantom II "301SQ 20th Anniversary"

Modeling & Text By Isami Akiyama

As explained on p.125, the Light gull gray was left on the porous variable vane of the actual aircraft however the painter said, "I actually wanted to make it white," so I painted it white in the example.

Kit adjustment (elimination of steps & prevention of breakage)

When assembling the kit, some parts are uneven and some might break easily, so these should be pre-treated.

The RF flash door (parts A1 and A2) at the rear of the fuselage can be adjusted later by making holes in the four corners of the mounting part in case it falls when the parts are glued.

When combining the upper and lower parts of the main wing, a notch is likely to be formed at the seam on the flap / aileron side. It is advisable to prepare a 0.2 mm thick plastic sheet as shown in the process photograph to prevent it from falling.

Since the fin tip (part X4) is slightly thicker than the vertical stabilizer, the gap can be eliminated by inserting a 0.3 mm thick plastic plate on the vertical stabilizer side to increase the thickness.

The fuel vent mast on the tail is easy to break. It would be a good idea to make a hole in the pop-up door mounting part and insert an L-shaped sprue.

Fuselage

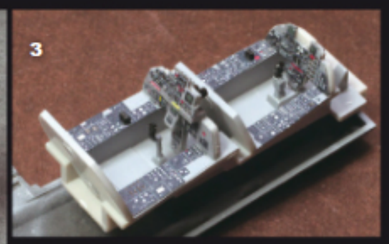
The fuselage parts divided into left and right are further divided into three parts in the front and rear for the development of the kit variations. If this is set up to match the front and rear after assembling the nose, front fuselage, and rear fuselage according to the instructions, the center may be slightly misaligned. A slight error in the width of each part will likely appear as a discontinuous seam on the outline side. For example, even if there is a gap of only 0.1 mm, in order to eliminate it and adjust the outline, it is necessary to putty, scrape a wide area, regenerate the mold, and so on. However, if the priority is given to the connection of the outlines and the front and rear of each of the left and right sides are glued first and the fuselage is in a simple left-right split half-body state, those distortions will appear as gaps in the center line. If this is filled with super glue, the work will be easier.

Attach the left and right sides of the fuselage

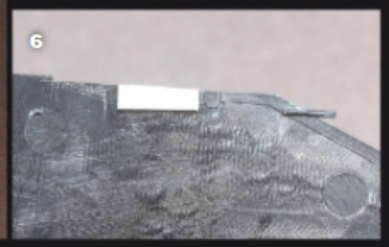
The mold, on the round access door on the

BUILD

Points for finishing an old kit in a modern style. 1



1. Structural parts are handmade with a plastic plate and added to the actuator mounting part of the canopy of the kit, which also serves as reinforcement. **2.** Painted with the Nano Aviation harness attached. **3.** Color photo-etched parts are used for the instrument panel and side console.



4. The RF flush door parts (A1 A2), attached to the rear of the fuselage, should be glued in advance. When working on it, if you make holes in the four corners of the receiving in order to push it out from the back side, you can finely adjust the level. **5.** When aligning the upper and lower parts of the main wing, the dividing line between the aileron and flap on the lower surface can easily drop and break, so it is good to put a 0.3mm plastic plate. **6.** The fin tip (X4) attached to the top is thicker than the vertical stabilizer. Since it is difficult to process the fin tip thinly, it is advisable to insert a 0.3 mm thick plastic plate on the vertical stabilizer side to match the thickness. **7.** The fuel vent mast at the tail can easily fold during the work, so it is recommended to insert an L-shaped sprue into the pop-up door mounting part to guard it.

back and the door for the aerial refueling port, disappears after the seams are erased, so it needs to be re-engraved. If too much pressure is applied during this process, the adhesive will crack. It is safe to reinforce the back side with a plastic plate. It would be a good idea to make your own template for the aerial refueling door. When incorporating optional detail-up parts such as the engine nozzle and auxiliary air intake on the underside of the fuselage, it is necessary to cut them according to their respective positions so that they do not interfere with each other.

Intake

As shown in the process photo, the lines around the shoulders of the intake parts (J1, J2) are inevitably discontinuous, so when bonding, give priority to the connection of the panel lines on the side, and then scrape the area around the diagonal lines.

Main wing and underside of nose

Of course, it is necessary to adjust the seams, but it is better to glue the main wing and the underside of the nose (part L1) first. Since there are many molds like the access panels near the joint between the two, we want to minimize the putty filling and scraping here.

Cockpit

The main instrument panel and side console have a simple structure, with only decals to attach on a flat surface.

In the example, I replaced it with the separately sold color photo-etched parts and added a throttle lever with some plastic material. In addition, the cases of each instrument are added to the back side of the rear seat's instrument panel. I think the seats are good as they are, but the details are improved by attaching the harnesses of the Fine Molds Nano Aviation series. Since the rear seats are too low, a 1.2mm thick plastic plate was glued to the bottom to raise it.

Aligning the top and bottom parts of the aircraft

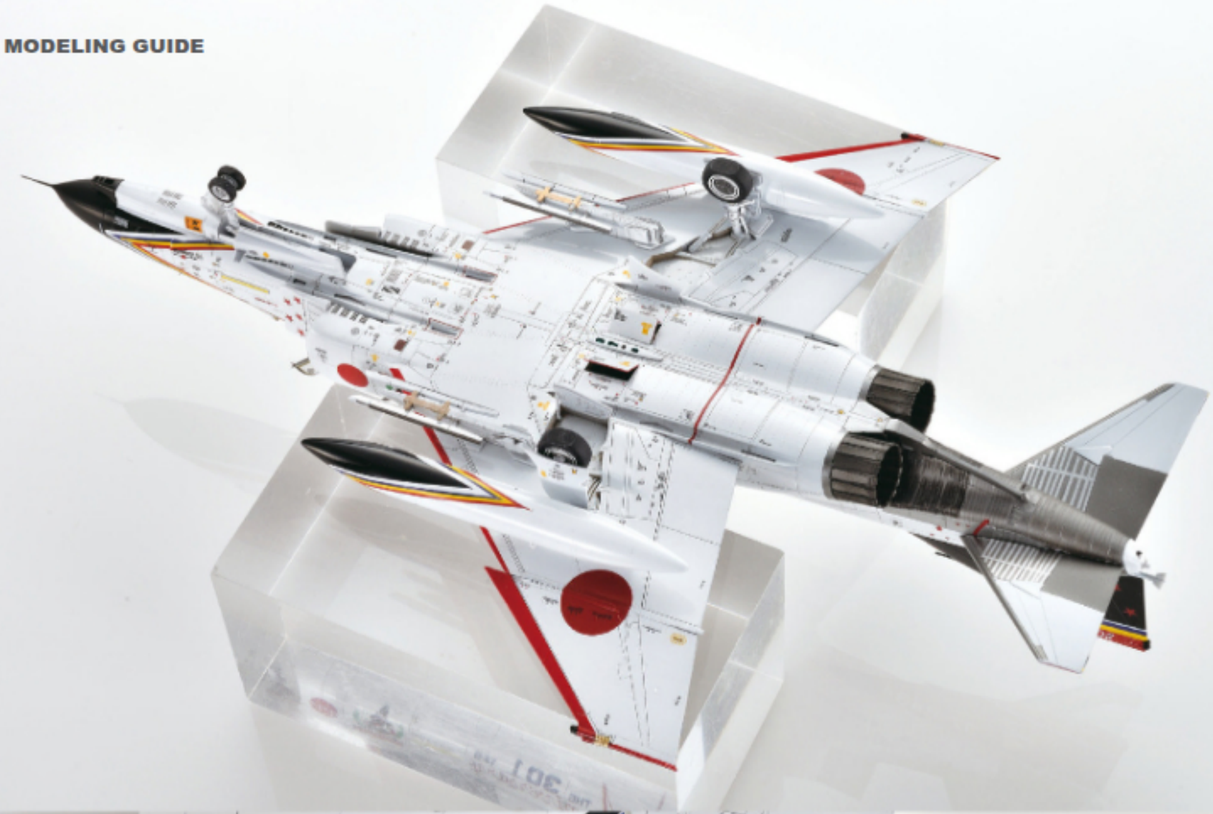
What I always care about here is that there is a tendency for gaps to form at the upper and lower seams (slightly behind the flap, slightly in front of the nozzle) at the rear end on the underside of the fuselage. While the outline on the fuselage side is slightly curved, the area where the upper surface parts of the main wing adhere to the fuselage surface is straight. This is the cause, so it can be solved by scraping the main wing parts a little and matching it with the curve on the fuselage side.

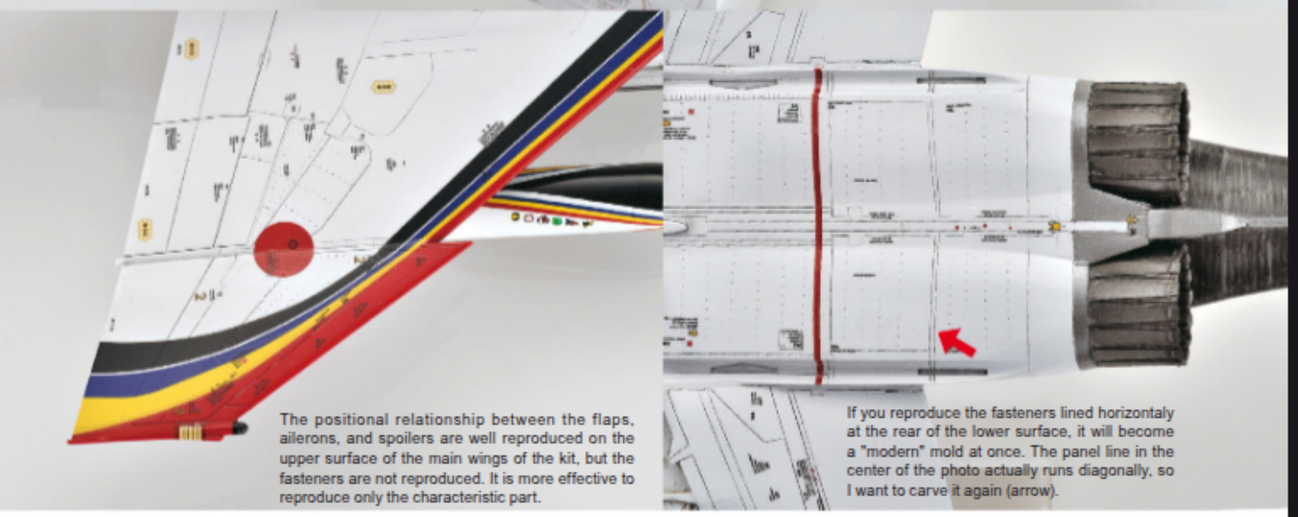
Additional work

It is a world's tradition that a kit released in the 20th century is inferior to a 21st century version kit. The 20th century version of the Hasegawa kit can be surprisingly "modern"

F-4EJ KAI PHANTOM II

"THE 301SQ 20TH ANNIVERSARY"





The positional relationship between the flaps, ailerons, and spoilers are well reproduced on the upper surface of the main wings of the kit, but the fasteners are not reproduced. It is more effective to reproduce only the characteristic part.

If you reproduce the fasteners lined horizontaly at the rear of the lower surface, it will become a "modern" mold at once. The panel line in the center of the photo actually runs diagonally, so I want to carve it again (arrow).

with panel lines and fasteners that have been engraved (not rivets). In particular, I would like you to reproduce fasteners, etc. from the panel around the front of the spoiler on the upper surface of the main wing, the upper surface of the outer wing, the upper surface of the fuselage, and the vicinity of the center of the lower surface of the fuselage to the rear. The photos and drawings in the "JASDF F-4 PHANTOM II PHOTO BOOK" published by Model Art will be helpful.

Also, since the kit has no detail about the characteristics of the hard points, when the center tank is not attached is not expressed at all in the kit, I attached it in the example, by cutting out from a 0.3 mm thick plastic plate and processing it.

The lightning strip of the nose radome is not represented, but this is unavoidable because of the separation of the parts. In the example, it was reproduced using a stretched runner, but there are several methods such as attaching shredded decals before painting.

Painting

The example is painted in the 301st Squadron 20th Anniversary Painting. Since the design is based on white, Tamiya lacquer pain LP-2 white was sprayed as the base color. It is good that the paint does not become too thick even if the process is repeated several times until it is firmly colored!

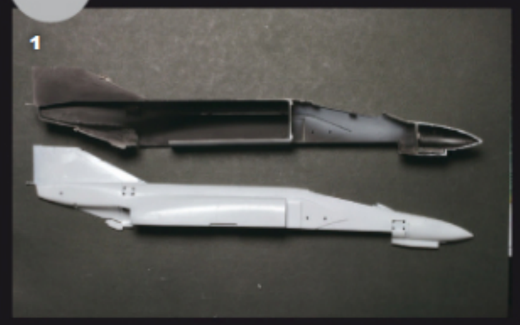
The black of the nose mohawk, vertical stabilizer and wing tank, and the red of the main wing front edge, vertical stabilizer and stabilizer were painted and finished with decals.

This kit is a resale item, but the decals are new and each object is sharpened. In addition, the Danger Arrow with the red part painted in white is reproduced properly. On the other hand, it is overlooked that the red on the front edge of the outer wing wraps around to the underside.

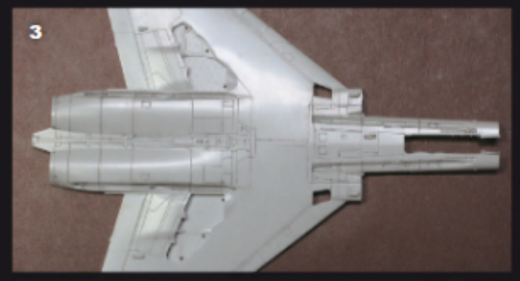
At the end, spray clear on the whole, but I want to make it thin enough to adjust the glossiness of the decal on the painted surface. If you spray it too thick, the solid feel of the surface will be lost by the acrylic resin of the clear paint. It should be avoided.

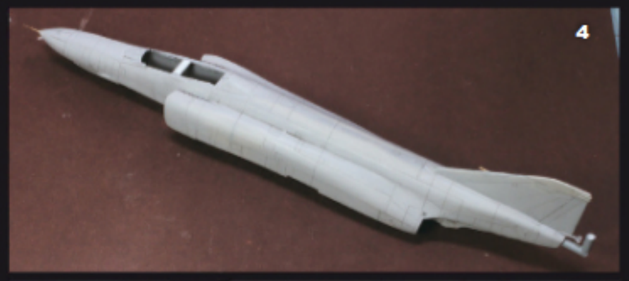
BUILD

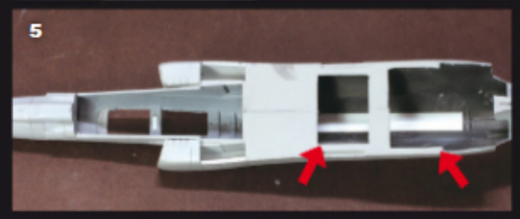
Points for finishing an old kit in a modern style. 2

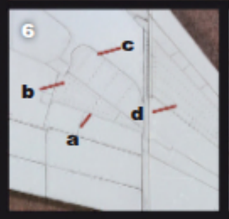


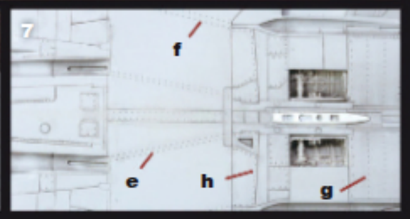
1. The fuselage parts are divided into three parts, front and back, but it is better to start by gluing the front and back of each of the left and right first to make it a vertical half body, giving priority to smoothing the outline. **2.** If the intake parts (J1 J2) are attached to the fuselage as they are, discontinuous lines will be created on the shoulders, so adjust by scraping the shaded areas in the photo.

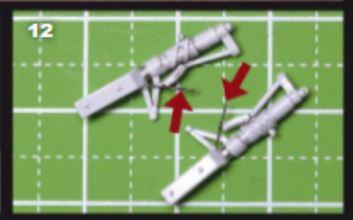












3. If the lower surface of the main wing (part C7) and the lower surface of the nose (part L1) are glued in advance, it will be easier to adjust the gaps, and to correct the mold. **4.** The left and right sides of the fuselage are glued together. Since the cockpit can be inserted from below, it is possible to proceed without waiting for the cockpit to be completed. It is convenient to make your own template for the aerial refueling door on the back. **5.** Resin parts from AIRES were used for the inside of the auxiliary air intake on the underside of the fuselage and the engine nozzle, but to do so, it is necessary to cut a part that interfere at the bottom of the fuselage parts (arrow). **6.** The Hasegawa kit has been on the market for a long time, but if you add some extra molds such as a fastener, it will become a modern kit. A spoiler hinge (**a**) and a characteristic fastener (**bcd**) were added to the upper surface of the main wing. **7.** The underside of the fuselage. The lines of two fasteners on the left and right running diagonally (**ef**), and the omitted center pylon base, etc. were reproduced. AIRES resin parts were used for the details inside the auxiliary air intake. Furthermore, it is more effective to reproduce the fastener line running in the lateral direction (**g**) and the fastener line along the panel line (**h**). **8.9.** Gaps are likely to appear at the joints of the upper and lower parts of the rear of the fuselage (arrows). This is because the line on the upper surface of the main wing and the line near the arrow on the fuselage do not match. As shown in the photo, it can be solved by scraping the main wing side and adjusting it to match the curve on the fuselage side. **10.** The lightning strip of the nose radome has not been reproduced, so in the example, it was expressed by adhering a stretched sprue. **11.** There are wedge-shaped reinforcement plates above and below the stabilizer in the actual aircraft of the example model. Since there is no mold on the underside of the kit, it is reproduced with a 0.3 mm thick plastic plate. If you add a strut to the main landing gear that mechanically contracts the leg when retracted, it will look like a phantom. **12.** If you add a strut to the main landing gear, it will look like more Phantom. Reproduced with 0.3mm brass wire (arrow)

Third-party parts used to get more detail in this example

1. Beaver Corporation 1:72 F-4EJ Kai Phantom II S.A. color photo etched BEL7011
2. Eduard 1:72 F-4E photo etched parts SS201
3. MASTER 1:72 ANGLE OF ATTACK
4. AIRES 1:72 F-4J Phantom II Auxiliary Air Intake
5. AIRES 1:72 F-4E, F, G, J, S Phantom II Exhaust Nozzles
6. Fine Molds 1:72 Pitot tube set for F-4EJ / F-4EJ Kai Phantom II (Ion nose) AA-52
7. Fine Molds 1:72 Rear view mirror and formation light for jet fighter NA15
8. Fine mold 1:72 Modern Aircraft Seatbelt Set #4 (for F-4, F-8 series) NA10

Great supporting role which flied with the F-4

HASEGAWA 1:48 KAWASAKI T-4
Modeling & Text By Sweeper II

KAWASAKI T-4

INFO

HASEGAWA 1:48 PT17
KAWASAKI T-4 JASDF

The domestic jet trainer T-4 is well known for its activities in Blue Impulse, but it is also deployed in the TAC unit, and is used for missions such as communication and photographs. This time, I make "the aircraft behind the scenes with a frog mark" which kept flying with the F-4.

1:48 Kawasaki T-4 The 301st Squadron Modeling & text by Sweeper II

About the kit

The first edition was released in 1999, nearly a quarter of a century ago, but it is a good kit that still works well with simple parts structure, sharp molds, and accurate proportions. There are no particular difficulties in assembling, but I try to build it in a beautiful finish by grasping several main points.

Cockpit

All the details are molded, so you can get a decent three-dimensional effect without improving the details. Decals are also available for the instruments, and they fit well with the mold, so users who want to avoid fine painting can feel at ease. It will be more realistic if you add structural materials made by plastic materials behind the rear seats. The ejection seat is made up of 10 parts, and the difference between the canopy breakers in the front and rear seats is also reproduced, so it will be enough to assemble it as it is. A pilot figure is also included, so you can firmly reproduce the seated state without any special processing.

Air intake

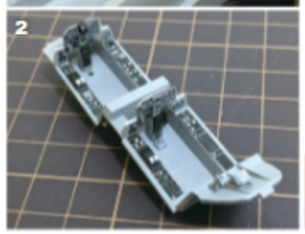
The depth of the air intakes placed on the left and right sides of the fuselage is fully reproduced. It is divided into upper and lower parts and the joint part is a little noticeable, so handle it carefully.
The lip part is a separate part. You can omit the masking process by gluing after painting in gray, but it will not match well, so it is better to scrape off the pins and adjust.

Fuselage

It is divided into left and right and bottom to reproduce a complicated shape, but the alignment is not bad. However, there are individual differences depending on the kit. If there is a slight gap between the canopy and the fuselage, adjust the width by scraping the adhesive surface of the fuselage (or inserting a plastic plate) so that you do not have to sand after glueing. Also, since the antenna on the top of the fuselage and the fuel dumping vent on the tail are integrated, it is better to separate them first, paint them, and then reattach them for a better finish.

BUILD

A careful work that makes the best use of the details of the kit for a sharp finish

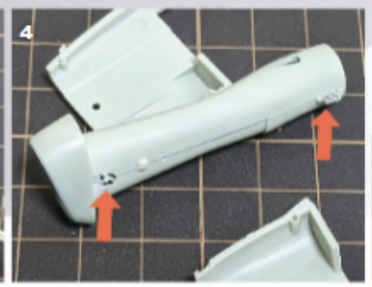


1. If you make your own structural material at the rear of the rear seats with some plastic material, it will feel more dense even when the canopy is closed. **2.** The cockpit is well reproduced with few parts. I tried using the decals in the box for the instrument panel and console. Since it fits well with the mold, it could easily obtain a realistic finish.

Beautiful finish with simple processing

BUILD

5. The antenna on the back is integrally molded. Since it interferes with the joint line processing, it is better to separate it first, paint it in white, and then reattach it for a better finish. **6.** Since the adhesive area of the upper and lower parts of the main wing is small, the inside should be reinforced with plastic material. **7.** Parts of the fuselage may be deformed. By inserting a plastic material and correcting the width and height, you can reduce the trouble of step processing.



BUILD

Control the air intake, control the T-4!

3. The depth of the air intake duct is also reproduced. Since the inner joint line will be noticeable, use double-sided tape to attach a sponge file to a rod-shaped tool (this time, a pin punch with a diameter of 2 mm) and sand it. **4.** Since there are slight steps around the air intake, scrape off all pins (arrows) and assemble with priority on surface alignment.

Wings

The flap parts of the main wing are divided, and when assembled straight, it will be in a down state (at takeoff). Since the base of the main wing is a little thinner than the fuselage, there will be a gap. If you adjust by inserting a plastic plate that is approx. 0.5 mm thick on the adhesive surface, you can process without putting putty.

The trailing edge of each wing is thickly molded, but the actual machine also has a certain thickness. In this example, I tried to finish it with an edge without scraping.

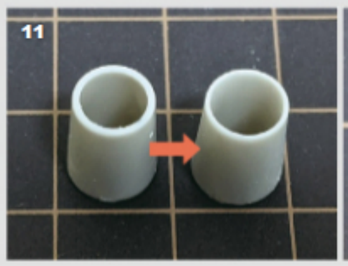
Details

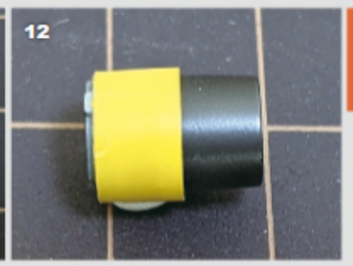
The structure around the landing gears is well reproduced with few parts, and the positioning is easy. Since the landing / taxiing light attached to the main landing gear cover which comes with the kit is a conventional type (1 light), attach self-made plastic parts so that it looks like a new 3-light type. This light is the only update point of the appearance, so it would be great if Hasegawa could make it into plastic parts. The antennas and sensors are also sharp, but when reproducing an ILS-equipped aircraft, the bar-shaped antenna attached to the underside of the nose is not included, so carve it out of plastic material and make it yourself.

BUILD

The important points of the strategy is around the canopy!

8.9. Depending on the individual difference of the kit, there will be a gap between the canopy and the fuselage. In the example, the adhesive surface (arrow part) in front of the nose was scraped off to slightly narrow the width. In addition, a margin for adhesion was added to the cockpit wall surface, and the canopy parts were slightly widened for adjustment. **10.** Since there is an air outlet for removing water droplets in front of the windshield, I tried to reproduce it by assembling plastic materials. Because the kit is well made, it is one of the few upgrade points.



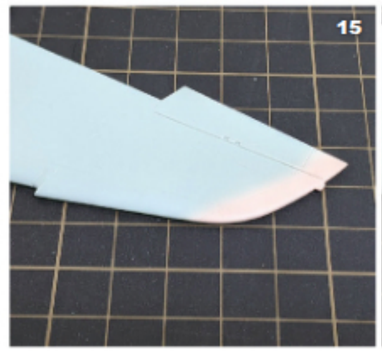


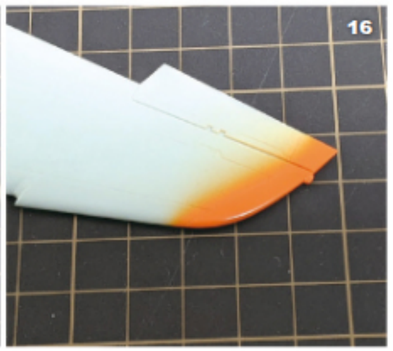
11. The exhaust pipe is a tubular type whose cross-sectional shape does not change. This part of the kit is a little thick. It is good to scrape from the inside. **12.** The exhaust pipe has a structure in which a part near the base protrudes from the fuselage, so it's reproduced by wrapping a 0.1 mm thick plastic plate painted in yellow.

BUILD

Secret techniques to reach a further level of perfection!

13.14. Reproduce the new 3-lamp type on the main landing gear door. First, carve a dent on the plastic plate with a 1.5 mm diameter drill, and then cut the periphery. After adhering and painting the light on the inside of the cover, insert an H-Eyes (1.2 mm diameter) of the WAVE to reproduce the lens. If the Mirror Finish of the Hasegawa is attached on the back of the lens, it will be a good point to shine.





PAINTING & MARKING

The base is the key to painting orange.

15.16. The Fluorescent orange on the tip of the wing has very low ability to conseal, so I would like to paint it after layering pink (using a Gaia Notes surfacer) and orange to create a solid base.

Painting

Although it is painted in a single gray color, the fluorescent orange on the wing tip is an accent. Since orange and fluorescent colors has very low ability to conseal, it is recommended to paint them in this order: pink, orange, fluorescent orange, and clear, then masking it and paint the gray as a main color. The basic color is FS36375, which corresponds to Mr. color 308. You can paint it as it is, but since the color is a little different from the image, so I adjusted it by adding about 30% of 315 gray and a little black.

Since many of the actual aircraft are clean, it will look more realistic if the weathering is applied to only a part of the aircraft.

This time, in addition to the access panel on the nose and the side of the intake, which are frequently opened and closed, smoke gray is sprayed on the front edge of the vertical stabilizer, which is easily soiled because it is grasped by maintenance personnel during inspections. The rear part of the underside of the fuselage is painted with brown enamel paint to express oil leakage.

Marking

In addition to the caution data, the decals of the kit come with a spare aircraft number and a unit mark corresponding to all deployment destinations at the time of release.

This time, I cut and pasted the spare aircraft number to make it 96-5620.

This aircraft was the only aircraft that could fly at Hyakuri base for a while after the T-4 engine malfunction that occurred in April 2019. It can be said that it was familiar to fans who visited the base for the F-4 just before retirement.

The unit mark is an old type that comes with the kit and has "white eyes", and there are only 5 stars on the scarf. I cut out the eyes part once and painted the black eyes part with a brush, and I cut out two stars on the scarf from the spare kit and pasted them to make it look like nice.

After the decals were dried, I sprayed the flat clear, and applied Hasegawa's coating polymer to finish it.

^ Modest weathering goes well with the T-4. In this example as well, the front edge of the vertical stabilizer, the walkway, and the frequently opened and closed access hatches and panels are lightly soiled and painted.

Don't forget to have fun...

< The pilot figures for front and rear seats included in the kit have different shapes around the arms, and the fitting is also good. This time, due to the fact that Unit 620 was frequently used for F-4 retirement photo missions, by converting the head of the rear seat from Tamiya's F-16, I finished it like a world-famous aerial photographer with a black helmet.

The best-selling aircraft kit

that should be lined up with the F-4 in your collection

T-33A

INFO

PLATZ 1:72
T-33 SHOOTING STAR
JASDF

1:72 T-33A The 301st Squadron

Modeling & text : Naonori Kanazawa

Twenty-one years have already passed since the abolition of all T-33 in 2000. However, even now, many people say that the supporting role that supports the phantom is the T-33. I definitely want to line up this model with the Phantom models.

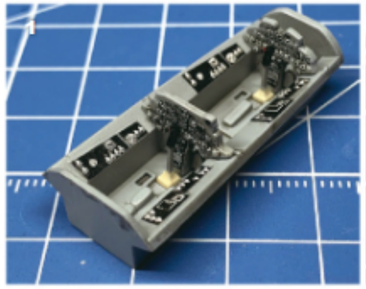
The T-33 kit released by Platz has become a new standard product since its launch in 2012, and is the most easily available kit currently on the market. The kit is great and is probably the best T-33 kit. Of course, you can make a good looking T-33 by assembling it according to the instructions, this time, we will also introduce the points to improve the degree of perfection.

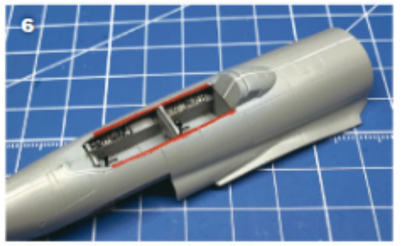
The cockpit has an extremely simple parts structure. I put a piece of masking tape on the seat and added a seat belt. It lacks a three-dimensional effect, but still given a sufficient finish in 1/72 scale.

The biggest point in this kit is the fuselage. A variation kit that reproduces the engine is also on sale, and the fuselage is divided into front and rear so that the maintenance scene of the actual aircraft can be reproduced (the engine is not included in the kit used this time).

If assembled as it is, there will be a slight gap on the dividing line. It seems that the rear part is thicker in order to store the engine. This time, while narrowing the width of the rear part, adjust the front part as well. First of all, in the rear part, scrape the joint surface of C3 on the right side. This not only narrows the width, but also eliminates the gap at the base of the vertical stabilizer, which is a tricky division. There is no problem with installing the engine nozzle parts C7, C26, and C27, but if they interfere with each other, you will need to scrape the parts.

Next, for the front part, widen the width behind the bulkhead at the rear of the pilot seat. First, place it on the main wing with only the nose side in front of the cockpit glued, and align the fillets. There is a gap of about 1 mm when the rear part is inserted here. Therefore, you can widen the





1. The console panel is reproduced with the decal included in the kit. **2.** Add a seat belt with masking tape. This will make it look better. **3.** When the lower surface part A3 on the front part of the fuselage is attached, there will be a gap with the lower surface part of the main wing, so adjust by inserting the plastic sheet. **4.** The fuselage is divided into front and rear at the trailing edge of the main wing, but the rear part is a little wide, and when the front part is widened and combined, there will be a wide gap. **5.** Lightly scrape the joint surface of C3 to reduce the width. By doing this, it is possible to reduce the gap at the base of the vertical stabilizer that occurs when the stabilizer is attached to C2. **6.** Insert a 1mm thick plastic plate from the rear of the front cockpit to the dividing line. **7.** Spray Mr. color C2 black as a base. **8.** For the main silver, C337 Aluminized Silver, which is included in the special color set of "JASDF Aluminized Old Timer Color", is used. It is brighter and more solid than C8 silver.

width of the front part by inserting a plastic plate of the same thickness. The rest is completed by processing in the same way as a normal joint erasing. After that, erase this joint line and level it, and it's done.

As with the fuselage, the bottom surface is where I want to work for the adjustment. The front part of the fuselage and the main wing are attached, and then the lower surface part A3 is attached, but the lines do not connect well. Therefore, I adjusted the height by adding a plastic plate etc. to the joint surface between A3 and the side of the fuselage. That all for the assembling details of this kit.

Mr. color series of the GSI Creos is used for all basic painting. First, spray C2 black on the entire surface as a base. For the main silver, I used C377 Aluminized Silver, which is included in the special color set "JASDF Aluminized Old Timer Color". The wing tips and the outside of the drop tank are painted with C59 orange, and the anti-glare inside the drop tank is painted with C15 dark green (Nakajima series). Washing is done with Tamiya Enamel XF-63 German Gray. To finish, dilute No.181 Super Clear Semi-gloss fairly thinly and coat everywhere to complete. The gloss is suppressed a little. Why don't you make this supporting role that is indispensable for the TAC unit and a historically famous aircraft that has supported the JASDF for half a century.

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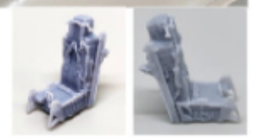
1/48 Ejection seat for F-2 is now on sale!



4818 F-2 Ejection seat
ACES-II for Hasegawa

More details on 1/72 F-4EJ Kai

7217 F-4EJ Kai Nose cone
& splitter plate set for Hasegawa

Upgrade points
: Lightning arrester
: Gun bay door
: Gun scavenge door
: Boundary layer
: Perforated panel of intake vane

1/48 Engine nozzle & Nose cone for F-2 is now on sale!

4814 F-2 Engine nozzle for Hasegawa

The F-2's F110-IHI-129 is precisely reproduced by 3D printing. The part to be painted with the body color is divided into separated parts to make painting easier. In addition, it is molded so that the composite material's texture of the fuselage and the joint can be reproduced only by washing.

4817 F-2 Nose cone with reinforcing plate for Hasegawa

The lightning strip is reproduced by 3D printing.
The parts of the kit are divided into upper and lower parts so you need to erase the adhesive line. But you can avoid this work by using this integrally molded parts. Including a reinforcing plate is difficult to shape after bonding. Pitot tube and AOA sensor parts are also included. The joints are also designed to allow the use of brass after-parts.

4801 F-4 Phantom II Late type
Engine nozzle for Hasegawa

Accurately reproduced the J79 engine

4812 F-4EJ Kai
Pylon + AAM-3 set

Dorsal mold template

You can easily engrave the disappeared mold with this template!

7215 F-4B/N/J Dorsal mold template
for Hasegawa

4813 F-4B/N/J Dorsal mold template
for Hasegawa

JASDF F-4Phantom II Photobook & Modeling Guide "The glorious 301SQ"

Japanese edition : Published on July 13th. 2021
English edition : Published on August 30th. 2022

Interview cooperation: JASDF
Plan & Supervision by : Isami Akiyama
Interview : Office A.K (Isami Akiyama / Akira Koyama / Kotaro Takahashi)
Photos : Isami Akiyama / Hideyuki Ogata / Akira Koyama / Eiki Nakashima / Kotaro Takahashi / Naoto Shibata / Shigeru Eto / Tsuneharu Kuwahara / Katsuhiro Okano / Tetsuya Jin / Yoshio Murakami
Hyakuri Air Base the 7 Wing Administration Division PR Section
Illustrations : Isami Akiyama / Yoshiyuki Kawano
Text : Isami Akiyama / Satoshi Watanabe
Modeling : Isami Akiyama / Masaaki Sekiya / Toichiro Yokoyama / Sweeper II / Naonori Kanazawa
Cooperation : Hiroyuki Yano / Yasushi Kawabuchi
Photos of models : Tomohiro Iwanaga (Studio Palette) / Tadashi Naraoka
Special Thanks : Tomohiro Kibune

Publisher : Kohei Ida
Chief editor : Takeru Tokura
Advertisement : Manabu Sasaki
Sales : Shinpei Ida
Overseas sales division : Justin Kim
justin@modelart.jp
Translation : Model Art
Translation Cooperation : Takashi Nishimura

MODEL ART Co.,Ltd.
4F, 2-3-9 Taito, Taito-ku, Tokyo, 110-0016 JAPAN
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Printed in Japan

We ship worldwide.

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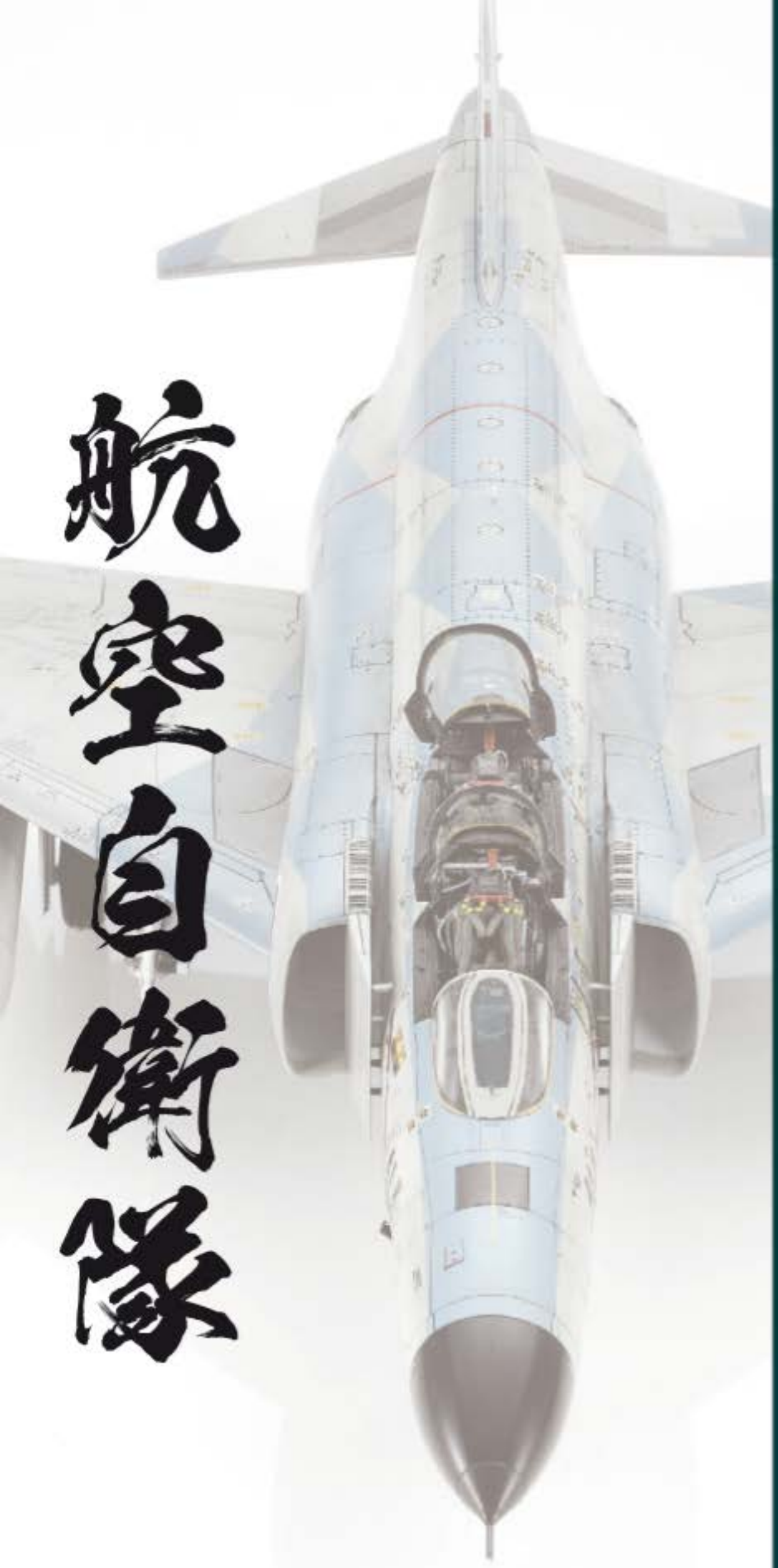

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F-4 PHANTOM II

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